Service Manual

VL2500™ Spot Luminaire

02.9676.0020

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Express yourself.

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VL1000™, **VL2000™**, **VL2201™**, **VL2202™**, **VL2400™** (and the individual product designations), **VL3000™**, **VL3500™**, **Series 1000™**, **Series 2000™**,
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VARI✳LITE® products are protected by one or more of the following patents, and other pending patent applications worldwide:

U. S. Patents No. 6,809,869; 6,796,682; 6,769,792; 6,578,987; 6,550,939; 6,282,027; 6,123,436; 6,113,252; 6,046,861; 6,031,749; 6,011,640; 5,969,868; 5,959,768; 5,934,794; 5,882,107; 5,829,868; 5,825,548; 5,798,619; 5,774,273; 5,769,527; 5,758,956; 5,728,994; 5,640,061; 5,590,954; 5,454,477; 5,432,691; 5,367,444; 5,329,431; 5,307,295; 5,282,121; 5,278,742; 5,209,560; 5,186,536; 5,073,847; 5,010,459; 4,980,806; 4,972,306; 4,800,474; 4,779,176; 4,701,833; 4,602,321;

U. S. Design Patents No. 524,245; 457,678; 452,339; 451,890; 442,944; 439,356; 420,332; 417,300; 415,301; 414,888; 413,995; 377,338; 366,712; 359,574; 350,408; 347,113;

Australia Patents No. 693,691; 683,695; 667,109; 649,264; 646,588; 586,095; 576,400;

Australia Design Patents No. 128,796; 128,795;

Canada Patents No. 2,070,670; 2,050,375; 1,270,675; 1,259,058;

Canada Design Patents No. 81,234; 81,233; 76,046;

European (UK) Patents No. 0 652 400; 0 586 049; 0 565 218; 0 547 732; 0 534 710; 0 495 305; 0 474 202; 0 379 970; 0 253 082; 0 253 081; 0 248 974; 0 192 882;

Germany Patents No. 694 25 943.8; 693 14 122.0; 692 08 615.3; 692 07 692.1; 691 31 478.0; 691 21 029.2; 690 33 385.4; 37 89 166.9; 37 68 727.1; 37 51 804.6; 37 50 201.8; 35 87 270.5;

Germany Design Patents No. M 98 01 745.4; M 96 04 515.9; M 96 04 514.0; M 94 07 689.8; M 94 02 951.2; M 499 03 583.6; M 498 11 203.9; G 93 12 884.3;

Spain Patents No. 2 090 191; 2 084 289; 2 020 960; 0 548 328;

Spain Utility Model Patent No. 2.031.748;

Spain Design Patents No. 0.137.502; 0.137.501; 0.133.573;

Greece Patent No. 910.400.544;

Japan Patents No. 2,843,696; 2,059,669; 2,055,324; 2,002,168; 1,966,525; 1,889,481; 1,792,721; 1,770,241;

Japan Design Patents No. 985,985-1; 985,985; 947,552; 945,436-1; 945,436; 1,106,089; 1,077,598; 1,072,598; 1,060,414; 1,002,123;

Korea Patents No. 76,310; 42,639; 283,770; 181,180;

Korea Design Patents No. 209,896; 209,895;

Mexico Patent No. 180,148;

Taiwan Patents No. 78,726; 66,975; 65,380; 28,275;

United Kingdom Design Registrations No. 2082526; 2072562; 2056387; 2056386; 2042174; 2038212; 2033108; 2029499.

All other brand or product names which may be mentioned in this manual are trademarks or registered trademarks of their respective companies or organizations.

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Version as of: 01-July-2008

Part number: 02.9676.0020 A

VL2500™ Spot Luminaire Service Manual

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How To Obtain Warranty Service

A copy of the Vari-Lite, Inc. Limited Warranty was included in the shipping package for this VARI✻LITE® product.

To obtain warranty service, please contact customer service at 1-877-VARI-LITE (1-877-827-4548) or customerservice@genlytecontrols.com and request a Return Material Authorization (RMA) for warranty service. You need to provide the model and serial number of the item being returned, a description of the problem or failure and the name of the registered user or organization. If available, you should have your sales invoice to establish the date of sale as the beginning of the warranty period.

Once you obtain the RMA, pack the product in its original packing material along with a copy of your invoice (if available) and write the RMA number legibly on or near the shipping address label. Return the unit, freight prepaid to:

Vari-Lite
10911 Petal Street
Dallas, Texas 75238
Attention: Warranty Service

As stated in the warranty, it is required that the shipment be insured and FOB our service center.

Confidential Property Disclosure

This technical manual is confidential property of Vari-Lite, a Philips group brand. All information contained herein is the sole and exclusive property of Philips Group and may not be used, disclosed, or reproduced in any manner without the prior written consent of Philips Group. The information furnished in this manual is for informational use only and is subject to change without notice. Philips Group and Vari-Lite assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual.

Compliance Notice

FCC This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with Vari-Lite system, service, and safety guidelines, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

CE

Declaration of Conformity

We declare, under our sole responsibility, that this product complies with the relevant clauses of the following standards and harmonized documents:

Safety (by Council Directive 73/23/EEC)

EN60598-1: 2000
EN60598-2-17: 1989/A2:1991

EMC (by Council Directive 89/336/EEC)

EN61000-6-4: 2001

We certify that VARI✳LITE products conform to the requirements of European council directives as stated above.

Safety Notice

It is extremely important to read ALL safety information and instructions provided in this manual and any accompanying documentation before installing and operating the products described herein. Heed all cautions and warnings during installation and use of this product.

Safety symbols used throughout this manual are as follows:

CAUTION advising of potential damage to product.

WARNING advising of potential injury or death to persons.

GENERAL INFORMATION PERTAINING TO PROTECTION AGAINST ELECTRICAL SHOCK, FIRE, EXPOSURE TO EXCESSIVE UV RADIATION, AND INJURY TO PERSONS CAN BE FOUND BELOW.

WARNING:
INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST FIRE

1. VARI✻LITE® luminaires have been designed for use only with certain Philips and Osram HID lamps. Note lamp type (MSR400, MSR575HR etc.) before replacing lamps. Installing another type of lamp may be hazardous.
2. Luminaires may be mounted on any type of surface as long as mounting instructions are followed. See instructions detailed in this manual.
3. Replace fuses with same type and rating only.
4. Note distance requirement from combustible materials or illuminated objects for VARI✻LITE® luminaires.

WARNING:
INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST ELECTRICAL SHOCK

1. VARI✻LITE® luminaires are designed for dry locations only. Exposure to rain or moisture may damage luminaire.
2. Disconnect power before servicing any VARI✻LITE® equipment.
3. Servicing to be performed by qualified personnel only.

WARNING:
INSTRUCTIONS FOR CONTINUED PROTECTION AGAINST EXCESSIVE EXPOSURE TO UV RADIATION

1. Many VARI*LITE® luminaires use an HID type lamp that produces UV radiation. DO NOT look directly at lamp.
2. It is hazardous to operate luminaires without lens or shield. Shields, lenses, or ultraviolet screens shall be changed if they have become visibly damaged to such an extent that their effectiveness is impaired. For example, by cracks or deep scratches.

WARNING:
INSTRUCTIONS FOR PROTECTION AGAINST INJURY TO PERSONS

1. Exterior surfaces of the luminaire will be hot during operation. Use appropriate safety equipment (gloves, eye protection, etc.) when handling and adjusting hot equipment and components.
2. Luminaires will have a hot lamp when operating. Disconnect power and allow lamp to cool before replacing.
3. Arc lamps emit ultraviolet radiation which can cause serious skin burn and eye inflammation. Additionally, arc lamps operate under high pressure at very high temperatures. Should the lamp break, there can exist a danger of personal injury and/or fire from broken lamp particles being discharged.
4. Wear eye protection when relamping.
5. Appropriate safety equipment (gloves, eye protection) should be used when handling damaged lamps.
6. If lamp is touched with bare hands, clean lamp with denatured alcohol and wipe with lint-free cloth before installing or powering up the luminaire.
7. The lamp shall be changed if it has become damaged or thermally deformed.

WARNING:
RF INTERFERENCE

1. This is a Class A product. In a domestic environment this product may cause radio interference, in which case, the user may be required to take adequate measures.

ARC LAMP CHARACTERISTIC CONSIDERATIONS

1. Arc lamps require a period of time to relight after a power interruption or a severe voltage dip. In some cases, lamp will automatically relight after it has cooled depending on Lamp Power-Up State (Lamp ON/ Lamp OFF) system configuration setting.
2. Burning position is Universal.

Sicherheitshinweise

Es ist äußerst wichtig, ALLE Sicherheitsinformationen und -hinweise in diesem Handbuch und dem beiliegenden Informationsmaterial zu lesen, bevor Sie die hierin beschriebenen Produkte installieren bzw. bedienen. Halten Sie bei der Installation und dem Einsatz dieses Produkts alle Warnhinweise und Vorsichtsmaßnahmen ein.

Folgende Sicherheitssymbole werden in diesem Handbuch verwendet:

VORSICHT - weist auf möglichen Produktschaden hin.

WARNUNG - weist auf mögliche Körperverletzung und Lebensbedrohung hin.

NACHSTEHEND FINDEN SIE ALLGEMEINE HINWEISE ÜBER SICHERHEITSVORKEHRUNGEN GEGEN ELEKTROSCHOCK, FEUER, ÜBERHÖHTE UV-STRAHLUNG UND KÖRPERVERLETZUNGEN.

WARNUNG:
HINWEISE ZUM FEUERSCHUTZ

1. VARI✻LITE®-Scheinwerfer sind ausschließlich für den Einsatz mit bestimmten Philips und Osram HID-Lampen geeignet. Achten Sie auf den Lampentyp (MSR400, MSR575HR etc.), bevor Sie die jeweiligen Lampen ersetzen. Die Installation eines anderen Lampentyps kann gefährlich sein.
2. Scheinwerfer können auf jeder beliebigen Oberfläche montiert werden, solange Sie die Montageanweisungen befolgen. Detaillierte Hinweise finden Sie in diesem Handbuch.
3. Ersetzen Sie Sicherungen nur mit Sicherungen vom gleichen Typ und gleicher Stärke.
4. Beachten Sie die Einhaltung des erforderlichen Sicherheitsabstandes der VARI✻LITE®-Scheinwerfer von brennbarem Material oder beleuchteten Objekten.

WARNUNG:
HINWEISE ZUM SCHUTZ GEGEN ELEKTROSCHOCK

1. VARI✻LITE®-Scheinwerfer eignen sich ausschließlich für trockene Standorte. Regen oder Feuchtigkeit können die Scheinwerfer beschädigen.
2. Unterbrechen Sie die Stromzufuhr, bevor Sie mit der Arbeit an VARI✻LITE®-Geräten beginnen.
3. Die Geräte sollten nur von qualifiziertem Personal gewartet werden.

WARNUNG:
HINWEISE ZUM SCHUTZ GEGEN ÜBERHÖHTE UV-STRAHLUNG

1. Viele VARI✻LITE®-Scheinwerfer verwenden einen HID-Lampentyp, der UV-Strahlen abgibt. SCHAUEN SIE NICHT direkt in die Lampe.

2. Es ist gefährlich, Leuchten ohne Linsen oder Blenden zu bedienen. Blenden, Linsen oder Ultraviolettschirme müssen ausgetauscht werden, sofern deren Schutzwirkung durch sichtbare Beschädigung (z. B. Sprünge oder Schrammen) eingeschränkt ist.

WARNUNG:
HINWEISE ZUM SCHUTZ GEGEN KÖRPERVERLETZUNGEN

1. Bei Betrieb sind die Außenflächen der Scheinwerfer heiß. Verwenden Sie bei der Bedienung von aufgeheizter Apparatur die jeweils geeignete Sicherheitsausrüstung (Handschuhe, Augenschutz etc.).
2. Bei Betrieb der Scheinwerfer ist die Lampe heiß. Unterbrechen Sie die Stromzufuhr und lassen Sie die Lampe abkühlen, wenn Sie diese austauschen.
3. Bogenlampen senden ultraviolette Strahlen aus, die Hautverbrennungen und Augenentzündungen verursachen können. Der Betrieb von Bogenlampen erfolgt unter Hochdruck und bei hohen Temperaturen. Sollte die Lampe zerbrechen, besteht die Gefahr von Körperverletzung bzw. von Feuer, das von Lampenteilen ausgelöst werden kann.
4. Tragen Sie beim Austausch der Lampen einen Augenschutz.
5. Die geeignete Sicherheitsausrüstung (Handschuhe, Augenschutz) sollte beim Umgang mit beschädigten Lampen verwendet werden.
6. Wenn die Lampe mit bloßen Händen berührt wird, reinigen Sie sie mit denaturiertem Alkohol und einem flusenfreien Tuch, bevor Sie die Scheinwerfer installieren oder in Betrieb nehmen.
7. Wenn die Lampe beschädigt oder durch Hitzeeinwirkung deformiert ist, muß diese ausgetauscht werden.

WARNUNG:
HF-INTERFERENZ

1. Es handelt sich um ein Produkt der Klasse A. In einer Wohnumgebung kann das Produkt Hochfrequenzstörungen verursachen. In diesem Fall müssen eventuell geeignete Maßnahmen getroffen werden.

BESONDERHEITEN VON BOGENLAMPEN

1. Bogenlampen benötigen eine gewisse Zeitdauer, um nach einem Stromausfall oder einem Spannungsgefälle wieder aufzuleuchten. In einigen Fällen wird die Lampe nach Abkühlung automatisch wieder aufleuchten, je nach der Systemkonfigurationseinstellung des Lampeneinschaltungsstatus (L ON/ LOFF).
2. Die Brennposition ist Universal.

Notes de sécurité

Avant de procéder à l'installation des produits décrits dans ce guide et de les mettre en marche, il est extrêmement important de lire TOUS les renseignements et TOUTES les directives de sécurité contenues dans ce guide ainsi que toute documentation jointe. Tenir compte de tous les avertissements et suivre toutes les précautions pendant l'installation et l'utilisation de cet appareil.

Les symboles de sécurité utilisés dans ce guide sont les suivants :

ATTENTION Ce symbole annonce que l'appareil risque d'être endommagé.

AVERTISSEMENT Ce symbole annonce qu'il y a risque d'accident grave ou même fatal.

CETTE SECTION CONTIENT DES INFORMATIONS GÉNÉRALES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES , LES INCENDIES, L'EXPOSITION EXCESSIVE AUX RAYONS UV ET TOUT AUTRE ACCIDENT POUVANT ENTRAÎNER DES BLESSURES.

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE LES INCENDIES

1. Les luminaires VARI✻LITE® ont été conçus pour être utilisés uniquement avec certaines lampes Philips et Osram HID. Vérifier le type de lampe (MSR400, MSR575HR etc.) avant de remplacer les lampes. L'installation d'un autre type de lampe peut poser un danger.
2. Les luminaires peuvent être fixés sur tout type de surface tant que les directives de montage sont respectées. Voir les explications détaillées dans ce guide.
3. Ne remplacer les fusibles qu'avec ceux du même type, ayant les mêmes caractéristiques.
4. Vérifier la distance à respecter entre les matériaux combustibles ou les objets illuminés et les luminaires VARI✻LITE®.

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE LES DÉCHARGES ÉLECTRIQUES

1. Les luminaires VARI✻LITE® sont conçus pour une utilisation au sec uniquement. Une exposition à la pluie et à l'humidité risque d'endommager le luminaire.
2. Débrancher l'appareil avant de procéder à la révision de tout matériel VARI✻LITE®.
3. Les révisions doivent être effectuées uniquement par des personnes qualifiées.

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE UNE EXPOSITION EXCESSIVE AUX RAYONS UV

1. Plusieurs luminaires VARI*LITE® utilisent une lampe de type HID qui produit des rayons UV. NE PAS fixer son regard sur la lampe.
2. L'utilisation des luminaires sans lentille ou blindage pose des risques. Tous blindages, lentilles ou écrans ultraviolet visiblement endommagés au point que leur efficacité en est affectée doivent être remplacés, par exemple s'il y a des fissures ou de profondes rayures.

AVERTISSEMENT:
DIRECTIVES POUR SE PROTÉGER CONTRE LES ACCIDENTS POUVANT ENTRAÎNER DES BLESSURES

1. Les surfaces externes du luminaire deviennent brûlantes quand l'appareil est en marche. Pour manœuvrer ou ajuster des appareils brûlants et leurs composants, se protéger suffisamment (gants, protection pour les yeux, etc.).
2. La lampe du luminaire est brûlante lorqu'il est en marche. Débrancher le courant et attendre que la lampe ait refroidi avant de la remplacer.
3. Les lampes à arc émettent des rayons ultraviolets pouvant causer de graves brûlures sur la peau et une inflammation des yeux. De plus, les lampes à arc fonctionnent sous haute tension à de très hautes températures. Si la lampe se casse, les particules de la lampe cassée peuvent causer blessures et/ou incendie en s'éparpillant.
4. Se protéger les yeux pour remplacer la lampe.
5. Utiliser des appareils de protection appropriés (gants, protection des yeux) pour manier des lampes endommagées.
6. Si la lampe a été touchée avec des mains nues, la nettoyer avec de l'alcool dénaturé et l'essuyer avec un chiffon non-pelucheux avant d'installer ou de brancher le luminaire.
7. Si la lampe a été endommagée ou a reçu une déformation thermique, elle doit être remplacée.

AVERTISSEMENT:
INTERFÉRENCE RF

1. Cet appareil est de Classe A. Dans un environnement domestique, cet appareil peut causer des interférences radio, et si c'est le cas, l'utilisateur peut avoir à prendre des mesures adéquates.

CONSIDÉRATIONS DES CARACTÉRISTIQUES DE LAMPES À ARC

1. Après une interruption de courant ou une baisse importante de voltage, les lampes à arc mettent du temps avant de se rallumer. Dans certains cas, la lampe se rallumera automatiquemet après s'être refroidie. Cela dépend de la manière dont le système est réglé pour le statut de mise en marche de la lampe (L ON/ LOFF).
2. La position Brûler est Universelle.

Aviso sobre Seguridad

Es muy importante leer TODA la información e instrucciones sobre seguridad que se indica en este manual así como en los documentos adjuntos antes de instalar y operar los productos descritos. Se debe prestar atención a todos los avisos y advertencias durante la instalación y uso de este producto.

Los símbolos de seguridad usados en este manual son los siguientes:

CUIDADO, indica posibles daños al producto.

ADVERTENCIA, indica posibles lesiones o muerte a las personas.

LA INFORMACIÓN GENERAL RELACIONADA A LA PROTECCIÓN CONTRAGOLPES DE CORRIENTE ELÉCTRICA, INCENDIO, EXPOSICIÓN EXCESIVA A RADIACIÓN ULTRA VIOLETA Y LESIONES A LAS PERSONAS SE PUEDE ENCONTRAR SEGUIDAMENTE:

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA INCENDIO

1. Las luminarias VARI✻LITE® han sido diseñadas para ser usadas solamente con algunas lámparas HID Philips y Osram. Tome nota del tipo de lámpara (MSR400, MSR575HR etc.) antes de reemplazarla. Instalación de otro tipo de lámpara puede ser peligroso.
2. Las luminarias se pueden instalar en cualquier tipo de superficie siempre que se sigan las instrucciones de instalación. Vea las instrucciones detalladas en este manual.
3. Reemplaze los fusibles solamente con los del mismo tipo y especificación.
4. Tome nota de los requerimientos de distancia de materiales combustibles u objetos iluminados para las luminarias VARI✻LITE®.

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA CHOQUE ELÉCTRICO

1. Las luminarias VARI✻LITE® están diseñadas solamente para lugares secos. La exposición a la lluvia o humedad pueden dañar la luminaria.
2. Desconecte la energía antes de dar servicio a cualquier equipo de VARI✻LITE®.
3. El servicio debe ser realizado solamente por personal calificado.

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTINUA CONTRA LA EXPOSICIÓN EXCESIVA DE RADIACIÓN ULTRA VIOLETA

1. Muchas luminarias VARI✳LITE® usan un tipo de lámpara HID que produce radiación UV. NO mire directamente a la lámpara.
2. Es peligroso operar luminarias sin lentes o protectores. Debe cambiar los protectores, lentes o pantallas ultravioletas si se aprecia que han sido dañadas, y que su efectividad pudiera estar deteriorada. Por ejemplo, si tuvieran rajaduras o raspaduras profundas.

ADVERTENCIA:
INSTRUCCIONES PARA PROTECCIÓN CONTRA LESIONES DE PERSONAS

1. Las superficies exteriores de las luminarias están calientes durante su operación. Use un equipo de seguridad apropiado (guantes, protección para los ojos, etc.) cuando haga ajustes en el equipo y componentes que están calientes.
2. Cuando las luminarias están en operación la lámpara estará muy caliente. Desconecte la energía y deje que la lámpara se enfríe antes de reemplazarla.
3. Las lámparas de arco emiten radiaciones ultravioletas que pueden ocasionar serias quemaduras a la piel e inflamación a los ojos. Además, las lámparas de arco operan a alta presión y muy alta temperatura. Si la lámpara se rompe, puede existir el peligro de lesiones al personal o un incendio ocasionado por las partículas de la lámpara rota que se caen.
4. Use protección para los ojos cuando vuelve a colocar una lámpara nueva.
5. Use un equipo de seguridad apropiado (guantes, protección para los ojos, etc.) cuando trabaje con lámparas dañadas.
6. Si toca la lámpara con las manos, limpie la lámpara con alcohol desnaturalizado y con tela sin pelusas antes de instalar o volver a conectar la luminaria.
7. Cambie la lámpara si está dañada o deformada termicamente.

ADVERTENCIA:
INTERFERENCIA RF

1. Este es un producto de Clase A. En el ambiente de la casa este producto puede ocasionar radiointerferencia, en cuyo caso, el usuario debe tomar las medidas adecuadas.

CONSIDERACIONES SOBRE LAS CARACTERÍSTICAS DE LA LÁMPARA DE ARCO

1. Las lámparas de arco requieren un período de tiempo para volver a iluminarse después de una interrupción de energía o de una severa caída de voltaje. En algunos casos, la lámpara se volverá a iluminar en forma automática después que se ha enfriado dependiendo de la configuración del sistema de energía de la lámpara (L ON / L OFF) (L encendida / L apagada).
2. La posición de encendido es universal.

安全性に関する注意事項

ここに記載されている製品を取り扱う場合は、まず本マニュアルおよび付属のマニュアルの安全性に関する情報と説明をすべてお読みください。また、実際に本製品を取り付けたり使用する際には、すべての注意事項および警告に留意して作業してください。

本マニュアルでは、以下の安全マークを使用しています。

注意：製品に損傷を与える危険性があります。

警告：人身事故につながる危険性があります。

感電、火災、UV 放射に対する過度の露出、および人身事故を防ぐための一般的な情報については、以下の説明をお読みください。

警告：
火災の発生を防ぐためのヒント

1. VARI*LITE® 照明器具は、PhilipsおよびOsramのHIDランプを使用するように設計されています。ランプを交換する際は、ランプの種類（MSR400、MSR575HR など）を確認するようにしてください。他の種類のランプを取り付けると危険です。
2. 照明器具は、本マニュアルの指示に従って操作するかぎり、どのようなタイプの表面にでも取り付けることができます。詳細については、本マニュアルを参照してください。
3. ヒューズを交換する場合は、同じヒューズ（同じ種類、同じクラス）を使用してください。
4. VARI*LITE® 照明器具は、可燃性物質または他の光源から必要な距離だけ離して配置してください。

警告：
感電を防ぐためのヒント

1. VARI*LITE® 照明器具は、乾燥した環境で使用するように設計されています。雨で濡れる場所や湿気の多い場所に取り付けると、照明器具が傷むことがあります。
2. VARI*LITE® 照明器具を修理点検する場合は、必ず先に電源を切ってください。
3. 照明器具の修理点検は、資格を持つ技師のみが行うようにしてください。

警告：

過度の **UV** 放射にさらされないためのヒント

1. VARI*LITE® 照明器具の多くは、UV 放射を生ずる HID タイプのランプを使用しています。ランプを直視することは避けてください。
2. レンズまたはシールドを使わずに照明器具を点灯すると危険です。レンズ、シールド、紫外線画面は、ひび割れや深い引っかき傷などにより、その効力が損なわれるようになったら取り替えるようにします。

警告：

人身事故を防ぐためのヒント

1. 照明器具が点灯しているときは、その外側が熱くなります。熱くなった器具やコンポーネントを取り扱う際には、適切な防具（手袋や保護用眼鏡）を使用してください。
2. 照明器具が点灯しているときは、そのランプが熱くなります。ランプを交換する場合は、照明器具の電源を切り、ランプの温度が下がるまで待ってください。ランプの裏ぶたをあけると、遮断スイッチが働いて、ランプの電源が切れる場合があります。
3. アーク灯は紫外線を放射します。この紫外線によって、ひどい火傷を負ったり、目の炎症を起こすことがあります。さらに、アーク灯は、高圧高温の状態で光を発します。そのため、万一アーク灯が破損すると、飛び散った破片で人身事故や火災が発生する危険性があります。
4. 再点灯するときには、保護用眼鏡を着用してください。
5. 損傷したランプを取り扱う場合は、適切な防具（手袋や保護用眼鏡）を着用してください。
6. 手袋を着用せずに直接手でランプを触った場合は、変性アルコールを使ってランプをきれいにし、糸くずの出ない布で拭いてから照明器具を取り付け、電源を入れるようにします。
7. 傷がついたランプや熱によって変形したランプは取り替えてください。

警告：

RF 干渉

1. 本製品は Class A に分類されます。本製品は、家庭環境において無線干渉を起こす可能性があります。その場合、使用者は適切な処置を取らなければならないことがあります。

アーク灯の特性

1. 停電後または大きな電圧ディップ後にアーク灯を再点灯する場合は、しばらく時間をおくようにしてください。Lamp Power-Up State （L ON/ L OFF）システム設定によっては、温度が下がったときに自動的に再点灯される場合もあります。
2. アーク灯は点光源です。

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Introduction

About This Manual

This manual provides descriptions, repair procedures, and illustrated parts breakdowns for all configurations of the VL2500™ Spot Luminaire. The manual is intended for use by Vari-Lite personnel and by Vari-Lite's customers/clients.

WARNING: It is important to read ALL accompanying safety and installation instructions to avoid damage to the product and potential injury to yourself or others.

This manual covers the following models:

Model	Part Number	Source
VL2000 Spot Luminaire	20.9676.0001	700W Arc

Note: Performing maintenance procedures contained in this manual may void the product warranty. Refer to the Vari-Lite, Inc. Limited Warranty card included in the shipping package for this VARI✳LITE® product.

Additional Documentation

A support webpage for VL2500 series luminaires is available at www.vari-lite.com (follow the "Support" link).

For installation and operation of the VL2000 spot luminaire, you can download the following user's manual in electronic (PDF) format:

- VL2500™ Spot Luminaire Users Manual (02.9676.0019).

Customer Service

Our Goal

At Vari-Lite, we are committed to providing you the highest quality in customer service. Our comprehensive resources are available to help your business succeed and ensure you get the full benefit of being a Vari-Lite customer. Whether your needs are telephone/troubleshooting assistance, product training or technical service, our full-time staff of experienced professionals are on-hand to provide support.

How to Reach Us

For assistance in your area, call the dealer from which your product(s) were purchased.

or

Contact an Authorized Service Center.

or

Contact the Vari-Lite Customer Service Department, 9am - 6pm CST Monday through Friday, at the following:

phone: 1-877-VARI-LITE (1-877-827-4548) or +1-214-647-7880
fax: +1-214-647-8038
email: customerservice@genlytecontrols.com

Additional Resources

For additional resources and documentation, please visit our website at: www.vari-lite.com and follow the Support link.

Technical Bulletins / Technical Notices

Technical Bulletins concerning the latest changes to VARI✳LITE equipment are issued from Vari-Lite. They are documentation supplements that contain procedures for equipment upgrades, retrofits, and repairs not found in the existing manuals. Technical bulletins are integrated into the appropriate equipment manuals as those manuals are revised.

Technical Notices are non-procedural documents that contain information regarding product support issues, software updates, and documentation corrections. All technical notices begin with the prefix TN and are numbered sequentially.

Technical Bulletins, Software Updates, support, and other information is available online at http://www.vari-lite.com/ under the Support Section.

To request access to the password-protected support areas, please contact Vari-Lite Customer Service at 1-877-827-4548 (+1-214-647-7880) or customerservice@genlytecontrols.com.

CHAPTER 1.

Description

This chapter provides an overview of luminaire features, components and operations.

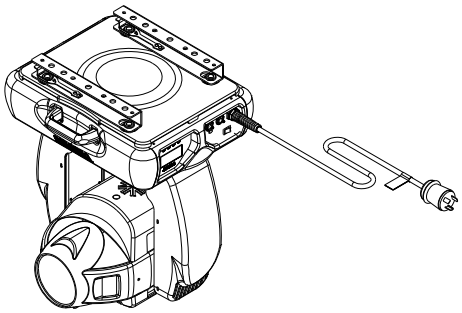
- **Features**
- **Major Components**
- **Principles of Operation**

SERVICE

Features

Overview

The VL2500 Spot luminaire comes complete with all of the qualities and options designers love from the original Series 2000™ fixtures. It is still small, lightweight, and fast with a 700-watt shortarc lamp, impressive lumen output, and a zoom range from 18.5° to 42°.



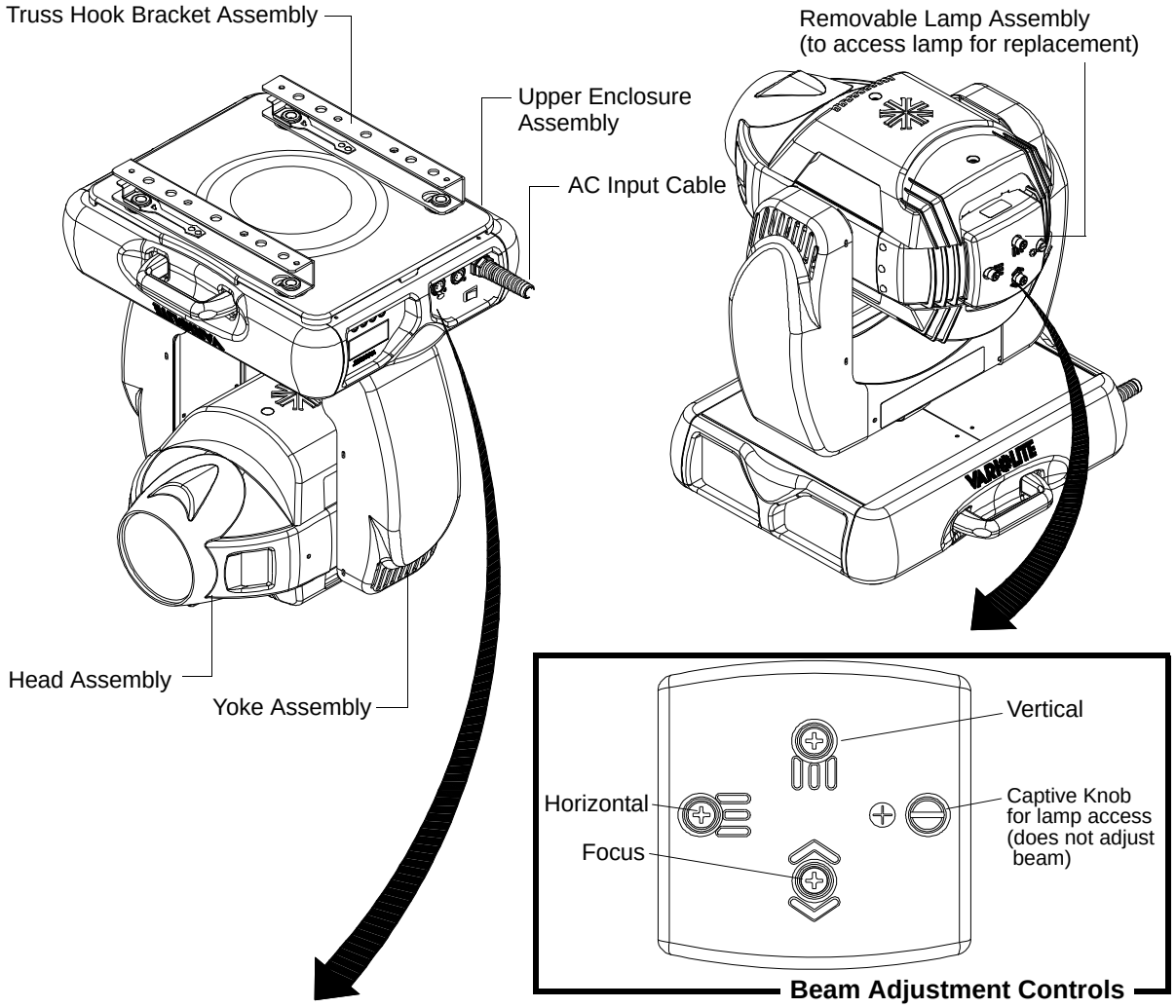
Features

- Color Mixing System: A three-filter CYM cross-fading mechanism. A fixed color wheel with 11 interchangeable color filters and one open space capable of continuous rotation for additional effects.
- Gobo Wheels: One, Six-position rotating gobo wheel with five rotatable, indexable gobo positions and one open position. One, 12-position wheel providing 11 easily loaded positions (and 1 open) for user-selectable gobo choices. Wheel is capable of continuous rotation for additional effects.
- Zoom Optics: Zoom angle of 2.3 to one. Continuously variable field angle from 18.5° to 42°. Programmable over a timed range of 2 seconds to 20 minutes.
- Edge and Pattern Focus: Variable beam focus to soften edges of gobos or spots.
- Beam Size: A mechanical iris provides continuous beam size control for both rapid changes and smooth timed beam angle changes in addition to the zoom optics.
- Strobe: A high-performance dual blade strobe system capable of ultra-fast operation.
- Pan/Tilt: Smooth, time-controlled continuous motion by way of a three-phase stepper motor system.
- Range: Pan - 540° , Tilt - 270°.
- Pan/Tilt Accuracy: 0.3° resolution.
- Weight: 59.2 lbs (26.9 kg)

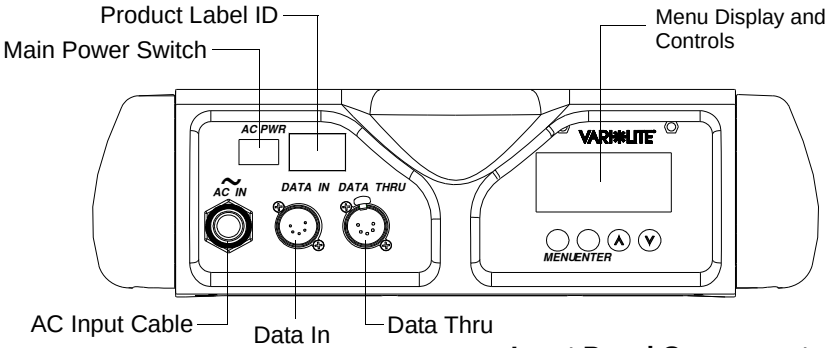
Major Components

External Components

The following illustration shows major luminaire components and controls.



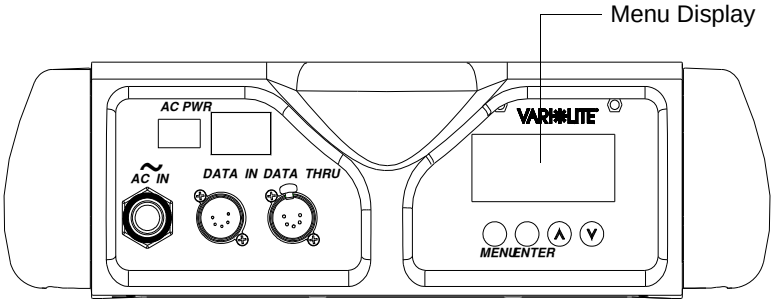
Beam Adjustment Controls



Input Panel Components

Menu Display

The menu system is a programmable set of commands used to configure, address, operate, and test the luminaire. The menu system is controlled at the Menu Display available at the enclosure input panel.



The menu system has seven main functions which are referred to as "1st level." Within these main functions, there can be up to four additional sub-functions (levels 2 thru 5), making five total levels.

Menu Controls

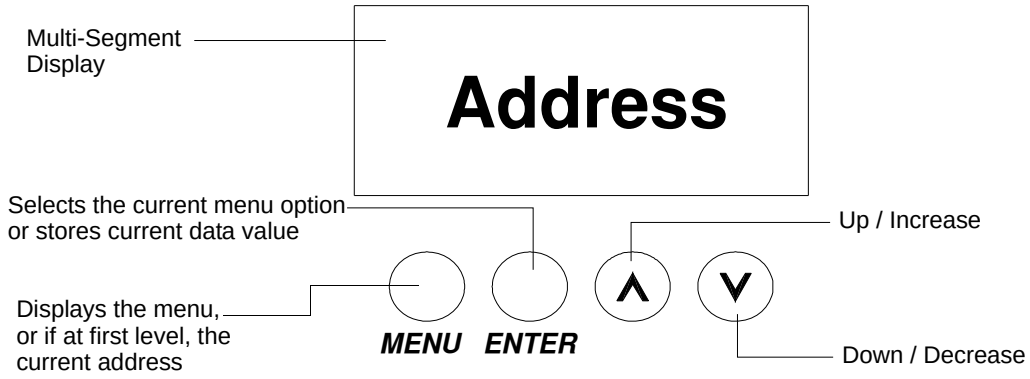
The menu system is controlled by four buttons. These buttons function as follows:

[Menu] button. Displays the menu, or if at first level, the current address.

[Enter] button. Selects the current menu option or stores current data value.

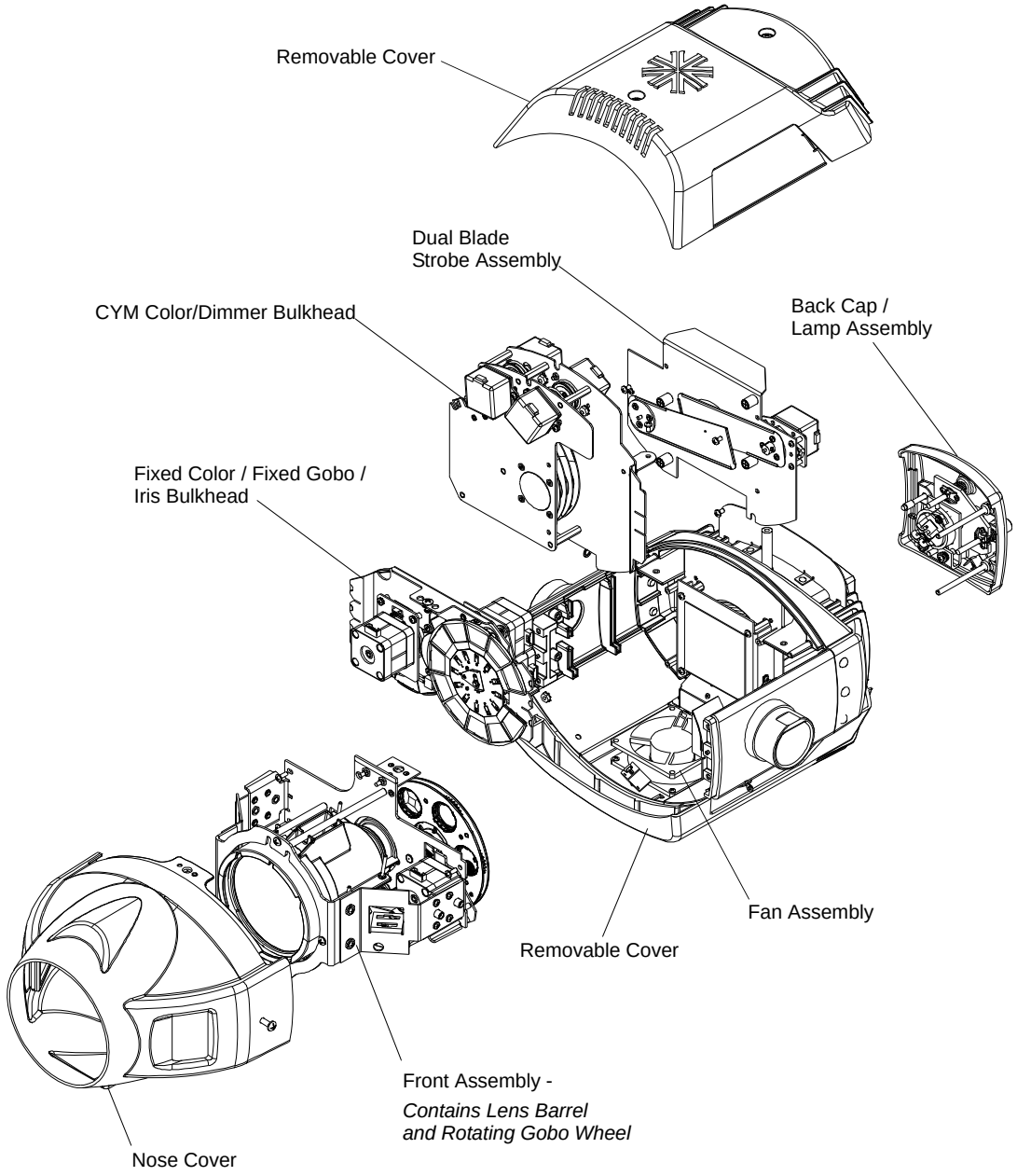
[Up] arrow. Scrolls menu options upward or increases current data value.

[Down] arrow. Scrolls menu options downward or decreases current data value.


Multi-Segment Display
Address
Selects the current menu option or stores current data value
Up / Increase
Displays the menu, or if at first level, the current address
MENU
ENTER
Down / Decrease

Head Components

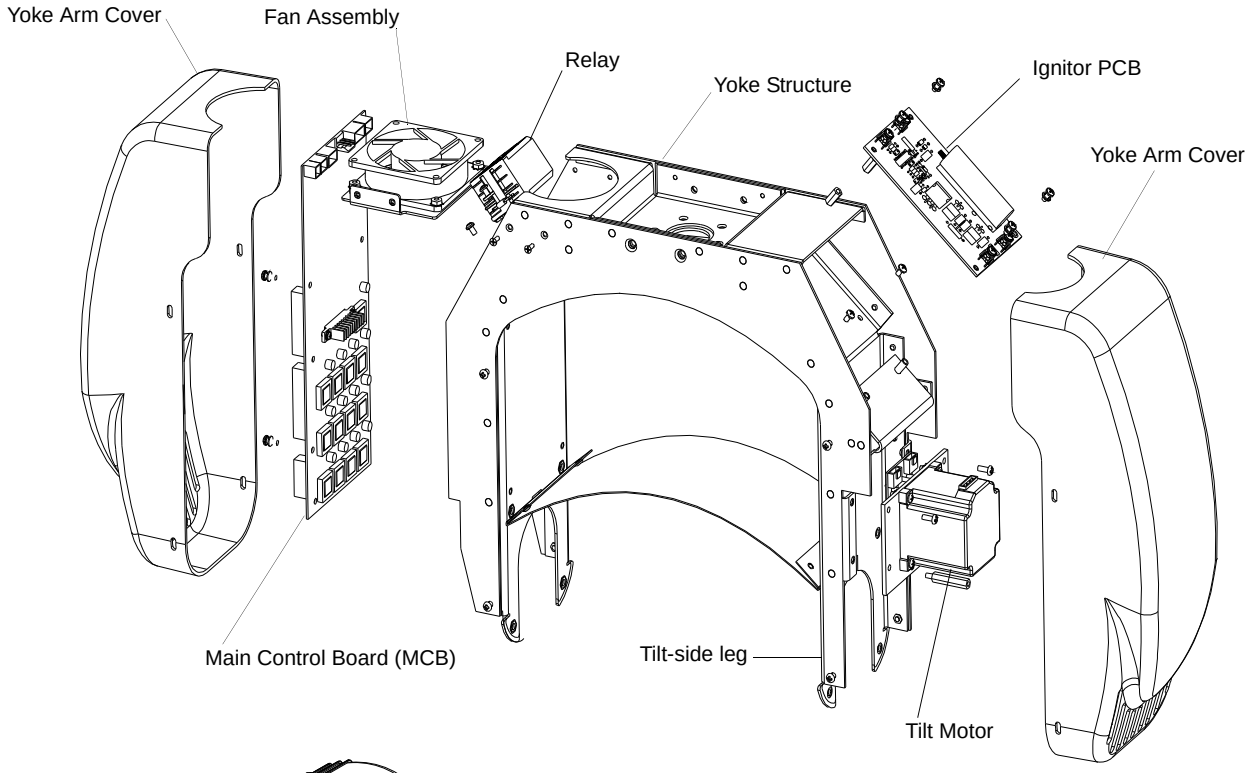
The following illustration shows the major sub-assemblies that are located in the luminaire head assembly. (Yoke and enclosure not shown for clarity.)

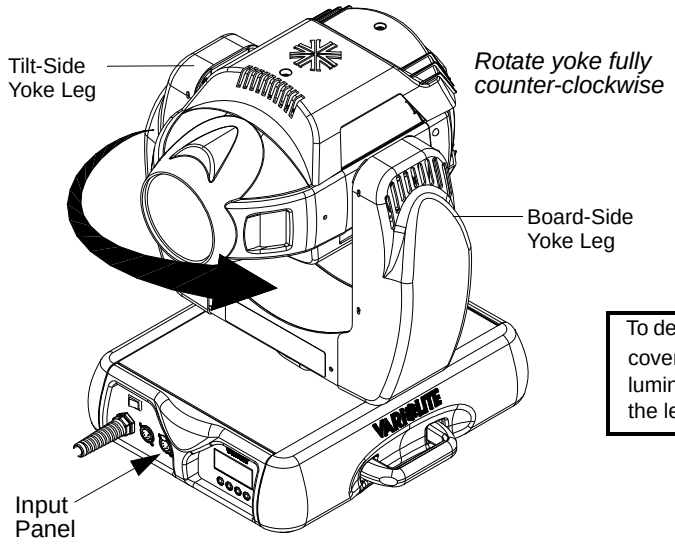


Note: This illustration shows current VL2500 components. For information on older models, please refer to the preceding revision of this manual, 02.9678.0020 0 (Revision zero).

Yoke Components

The following illustration shows the major sub-assemblies that are located in the luminaire yoke assembly. (Head and enclosure not shown for clarity.)

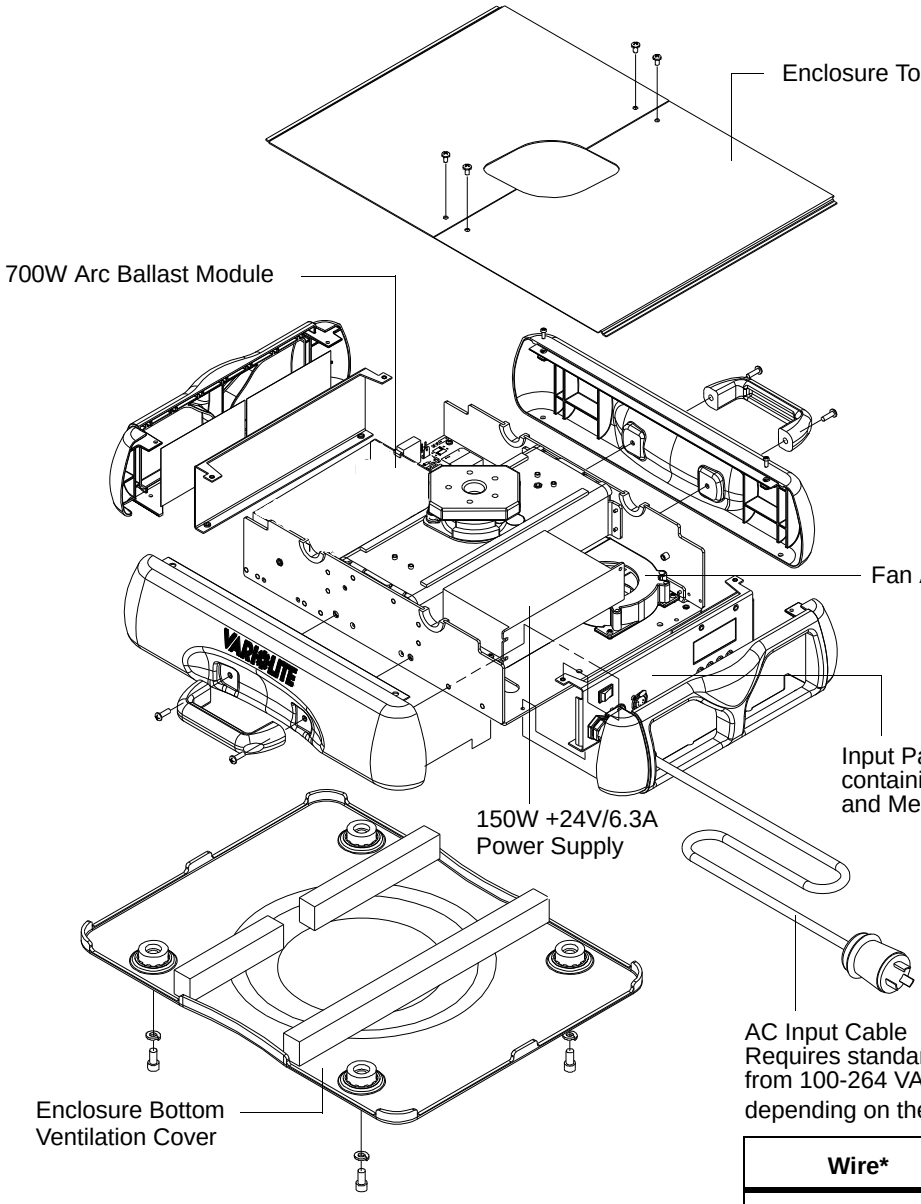




To determine which yoke leg is which without having to remove the covers, rotate yoke counterclockwise until it stops, then look at the luminaire while facing the input panel. The tilt-side leg is the leg to the left; the board-side leg is the leg to the right.

Enclosure Components

The following illustration shows the major sub-assemblies that are located in the luminaire enclosure assembly. (Yoke and head assembly not shown for clarity.)



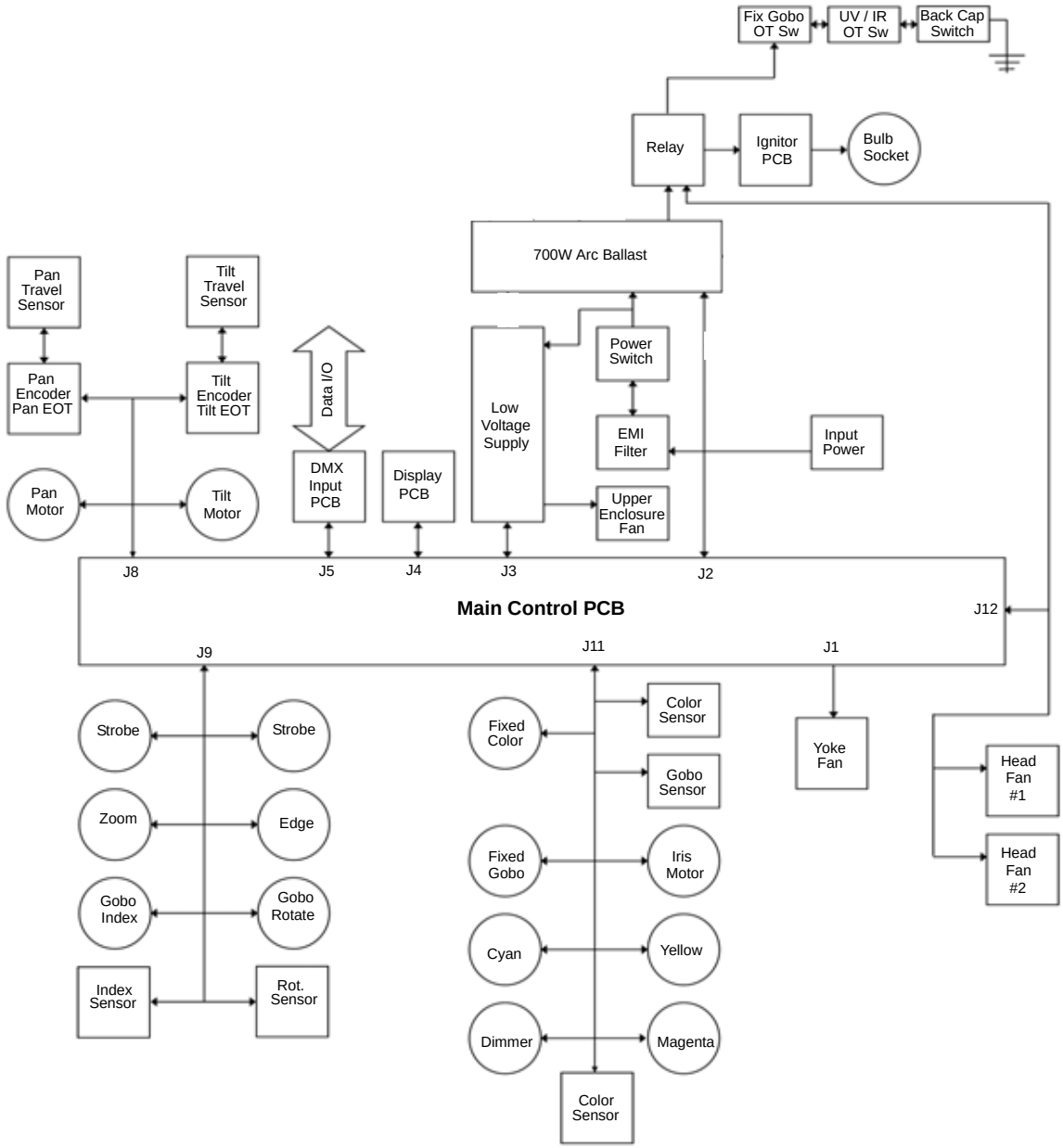
Wire*	Connection
Green/Yellow	AC Ground
Blue	AC Neutral
Brown	AC Line

* International (Harmonized) Standard

Principles of Operation

Power and Data Flow Diagram

The following diagram shows how data and power are distributed in the luminaire.



CHAPTER 2.

Maintenance

This chapter contains test, service, and standard maintenance procedures.

- **Testing**
- **Troubleshooting**
- **Maintenance Procedures**

SERVICE

Testing

Testing Software

Testing software is available in all Series 2000 luminaires through the luminaire's menu system **TEST** function.

For information on specific tests and test parameters, see the VL2500™ Spot Luminaire User's Manual (VL Part no. 02.9676.0019).

Note: After 10 seconds of inactivity, the menu display will change to the default state showing the address.

Lamp

The **Lamp** option is available in the test menu. This option sets the lamp intensity to 100% and will adjust to produce a tight beam. Pan/Tilt are disabled while using the **Lamp** option, and pan/tilt settings will be restored upon exit of the **Lamp** feature.

Note: When setting the **Lamp** option on luminaires linked by a five-wire DMX cable, pan and tilt will be disabled for all the luminaires that are linked.

To run tests:

Step 1. Press [Menu].

Step 2. Press [Up] / [Down] arrows until **TEST** appears. Press [Enter].

Step 3. Use [Up] / [Down] arrows to select a parameter to test.

Step 4. Press [Enter] to run test.

Step 5. Press [Menu] to stop test at any time.

Troubleshooting

Error Messages

If a problem occurs during luminaire calibration, at the end of the calibration sequence the Menu Display will cycle through any applicable error message(s), one at a time until the end of the list is reached. To review the error messages again, it will be necessary to access them using the Status function. (Refer to "Troubleshooting Guide" on page 14 for a list of possible causes and remedies associated with the error messages.)

To access error messages:

Step 1. Press [Menu].

Step 2. Press [Up] / [Down] arrows until Fixture appears. Press [Enter].

Step 3. Press [Up]/ [Down] arrows to access Status. Press [Enter]. (Display will now scroll through any error messages or display OK if no errors.)

Table 2-1: Error Messages

Display	Message...
OK	No Errors Found
Pan/No Sens	Pan sensor not found.
Pan/Encoder/Fail	Pan encoder failure.
Tilt/No Sens	Tilt sensor not found.
Tilt/Encoder/Fail	Tilt encoder failure.
Index/No Sens	Gobo Index sensor not found.
Gobo/No Sens	Rotating Gobo sensor not found.
Fixed Gobo/No Sens	Fixed Gobo sensor not found.
Dimmer/No Sens	Dimmer sensor not found.
Blue/No Sens	Blue sensor not found.
Amber/No Sens	Amber sensor not found.
Magenta/No Sens	Magenta sensor not found.
ColWheel/No Sens	Color wheel sensor not found.
Zoom/No Sens	Zoom sensor not found.
Edge/No Sens	Edge sensor not found.

WARNING: As with any repairs or maintenance to Vari-Lite luminaires, service should only be performed by a trained and qualified service technician or at an Authorized Vari-Lite Service facility.

Troubleshooting Guide

If a problem is suspected, try recalibrating the luminaire to prompt an error message. Refer to "Troubleshooting" on page 13 for more information. The chart below provides possible causes and remedies for each message.

Table 2-2: Troubleshooting Guide

Message	Symptom	Description	Possible Cause and Remedy
n/a	No response to DMX data	DMX Failure	MCB connector disconnected... - check MCB DATA IN connection.
n/a	Lamp douses frequently	Lamp Douse	Fan failure... - check fans for proper connection and operation.
n/a	Lamp will not strike	Lamp Strike Failure	Lamp cutout switch disengaged... - check lamp cutout switches at lamp box and fan ducts. Bad lamp... - replace lamp. Low input voltage... - check input power (must be 200 to 264 VAC)
n/a	Luminaire behaves oddly	Profile Not Matched	Profile not set correctly... - check Setup menu for correct type (spot or wash). - check start DMX address
No Sens	No control, continuous recalibration, and/or mechanism at wrong position	Mechanism failed to find sensor (reported for Cyan, Yellow, Magenta, ColWheel, Gobo, Index, Gobo, Zoom, Dimmer and Edge)	Motor power not connected... - connect motor power. Sensor not connected... - connect sensor. Movement restricted or impeded... - remove obstruction, check cable routing, and/or check voltage at MCB test point.
n/a	Luminaire does not power-up	No power	Switch not turned on... - verify switch is turned on. Not plugged in... - ensure A/C cable is connected to power source.
Pan/ Encoder/ Fail	Luminaire will not pan	Pan Encoder Failure	MCB pan/tilt connector disconnected... - connect MCB pan/tilt connector (J8). Pan motor disconnected - connect pan motor power. Encoder faulty... - replace pan end-of-travel/encoder sensor assembly.

Table 2-2: Troubleshooting Guide (Continued)

Message	Symptom	Description	Possible Cause and Remedy
Pan No Sens	Luminaire will not pan or hits against stop	Pan Sensor Not Found	EOT flag attached to large pulley is not engaging the EOT sensor... - ensure flag is attached to the large pulley. - ensure that flag passes through the sensor at a depth sufficient to engage the sensor beam. Pan belt disconnected, extremely loose or not installed properly... - properly install belt between pan motor and large pulley.
Tilt/ Encoder/ Fail	Luminaire will not tilt	Tilt Encoder Failure	MCB pan/tilt connector disconnected... - connect MCB pan/tilt connector (J8). Tilt motor disconnected - connect tilt motor power. Encoder faulty... - replace tilt end-of-travel/encoder sensor assembly.
Tilt No Sens	Luminaire will not tilt or hits against stop	Tilt Sensor Not Found	EOT flag attached to large pulley is not engaging the EOT sensor... - ensure flag is attached to the large pulley. - ensure that flag passes through the sensor at a depth sufficient to engage the sensor beam. Tilt belt disconnected, extremely loose or not installed properly... - properly install belt between tilt motor and large pulley.
n/a	Color, dimmer or strobe mechanisms will not move	Color, Dimmer, or Strobe Failure	MCB connector disconnected... - check MCB connector at J9 and/or J11.
n/a	Zoom/Edge mechanism will not move	Zoom/Edge Failure	MCB connector disconnected... - check MCB connector at J9 and/or J11.
n/a	Gobo or iris mechanisms will not move	Gobos or Iris Failure	MCB connector disconnected... - check MCB connector at J9 and/or J11.
n/a	Self tests will not run or software download does not work.	DMX Data Input	Detecting DMX data... - disconnect DMX input cable.
n/a	Erratic control of luminaire	DMX Termination	No DMX termination or termination not correct... - check DMX terminator.

Maintenance Procedures

Head Assembly

This section provides removal and replacement procedures for components found in the luminaire head assembly.

Lamp Replacement

Parts:

71.2528.0700 LAMP, 700 WATT SHORT ARC

WARNING: Remove power from luminaire before performing maintenance.

To replace lamp:

Step 1. Remove power from luminaire.

WARNING: Lamps will be extremely HOT after operation. Allow lamp to cool before replacing.

Step 2. At backcap, using slotted screwdriver (or fingers) turn captive knob until loose.

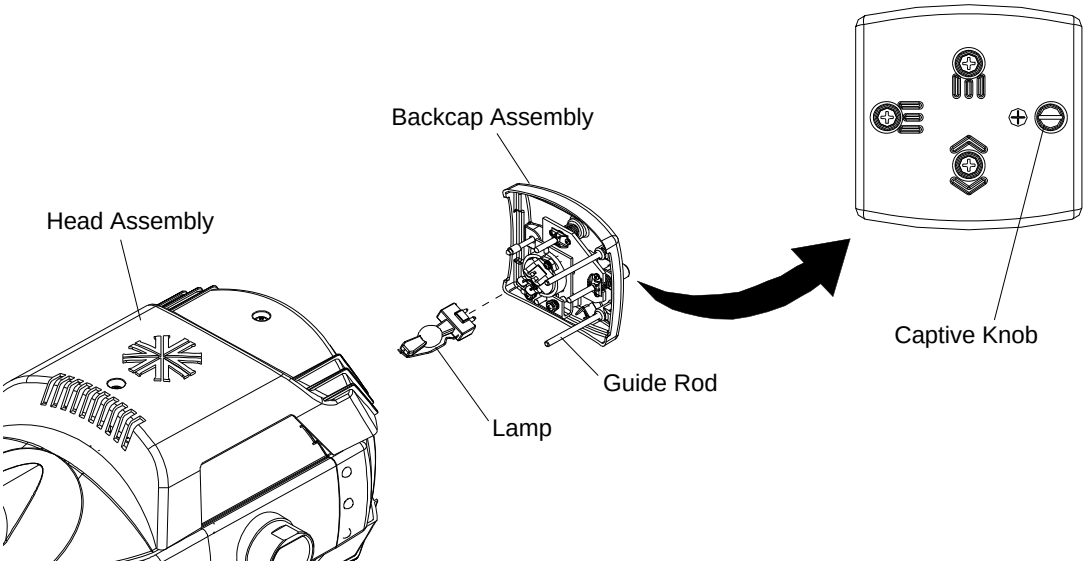


Figure 2-1: Replacing Lamp

Step 3. Slide backcap away from head assembly (it will remain attached by tether and lamp wires).

Note: Wear cotton gloves or other covering while servicing lamp. Touching lamp glass with bare fingers will leave oil and may cause the lamp to explode or reduce lamp life. If required, use alcohol and cotton cloth to thoroughly clean glass portion of lamp.

Step 4. Remove lamp by pulling straight out of socket.

Step 5. Install new lamp by pressing into socket. Ensure lamp is fully seated in socket and parallel to guide rods. (Lamp can be damaged when inserted through reflector if not parallel to guide rods.)

Step 6. Align guide rods in guide holes and slide backcap into head assembly. Re-tighten captive knob.

Step 7. If required, reset lamp hour counter as follows. (Refer to "Menu System" in VL2500 Spot User's Manual for more information.)

a. Power up luminaire.

b. At Menu Display, press [Menu].

c. Press [Up] / [Down] arrows until Config (Configuration) appears. Press [Enter].

d. Press [Up] / [Down] arrows until Lamp appears. Press [Enter].

e. Press [Up] / [Down] arrows to access ResetHrs. Press [Enter] to reset lamp hour.

f. Align lamp. Refer to "Align for a Flat Field" in VL2500 Spot User's Manual.

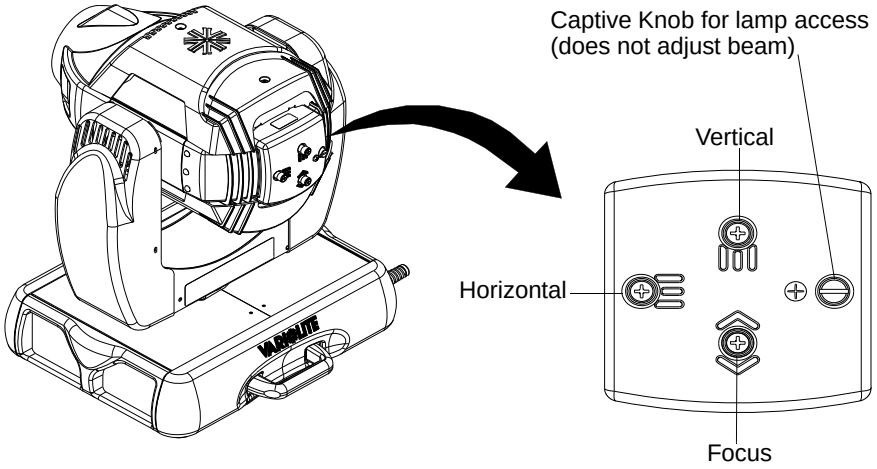


Figure 2-2: Lamp Alignment

Color/Gobo/Iris Bulkhead Replacement

Parts:

21.9676.4120 ASSY, COLOR/GOBO/IRIS BULKHEAD

Procedure:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At top head cover, gradually loosen two 8-32x3/8" captive screws and remove cover. (Cover remains attached by tether.) **Figure 2-3**.

Step 3. At CYM crossfade color bulkhead, disconnect wiring, remove two 6-32x1/4" PPB SEMS screws, and remove assembly.

Step 4. At color/gobo/iris bulkhead, remove two 6-32x3/8" PPZ SEMS screws to release bulkhead.

Step 5. At color/gobo/iris bulkhead, disconnect wiring harness connectors from color wheel motor, iris motor, and color sensor. (Note: Remaining motor and sensor connections will have to be disconnected in Step 6.)

Step 6. Slide bulkhead partially out of head assembly and disconnect gobo wheel motor, gobo sensor, and temperature sensor connectors.

Step 7. Remove bulkhead from head assembly.

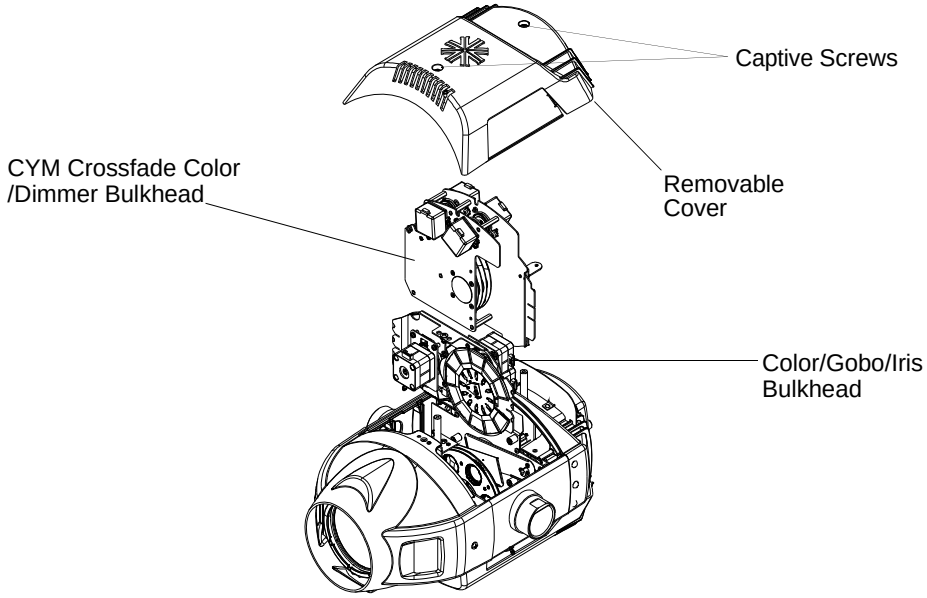


Figure 2-3: Color/Gobo/Iris Bulkhead Replacement

CAUTION: Make sure wiring placement does not interfere with moving parts.

Step 8. Install replacement assembly by performing Steps 2–7 in reverse order.

Standard Gobo/Color Filter Replacement

WARNING: Users of VARI✻LITE luminaires should not install or use metal gobos. The use of metal gobos in any VARI✻LITE product may damage the luminaire and could void the luminaire's warranty.

Parts:

Standard Gobo or Color Filter as required

To remove and replace a standard gobo or color filter:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At head cover, loosen two captive screws and remove cover. (It will remain attached by tether.) **Figure 2-3**.

Note: In some cases it is easier to slide bulkhead partially out of head assembly to access gobos/filters. To do this, use #2 Phillips screwdriver to two 6-32 PPZ screws and slide bulkhead upward. **Figure 2-4**.

Step 3. Remove CYM crossfade color assembly.

Step 4. Rotate wheel until required gobo/filter is accessible.

CAUTION: Do not touch filters with bare fingers. Wear cotton gloves or other covering while replacing.

Step 5. Using fingers, pull gobo/filter out of wheel. **Figure 2-4**.

Step 6. Noting proper orientation of carrier slot, insert new gobo/filter into position and push fully into place.

Step 7. Re-install bulkhead (if applicable) and re-install head cover.

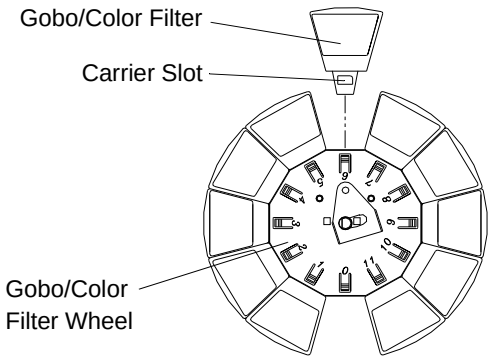


Figure 2-4: Standard Gobo/Color Filter Replacement

Strobe Bulkhead Replacement

Parts:

22.9676.0016 ASSY, STROBE BULKHEAD

Procedure:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At head cover, loosen two captive screws and remove cover. (The cover is attached by tether.) **Figure 2-5**.

Step 3. Remove CYM crossfade color assembly.

Step 4. Remove color/gobo bulkhead assembly.

Step 5. (Optional) Remove spot optic assembly (to gain direct access to four mounting screws if right-angle screw driver is not available).

Step 6. At strobe bulkhead, remove screws.

Step 7. Disconnect motor wire connectors from motors.

Step 8. Slide bulkhead out of head assembly.

Step 9. Install replacement assembly by performing Steps 2–8 in reverse order.

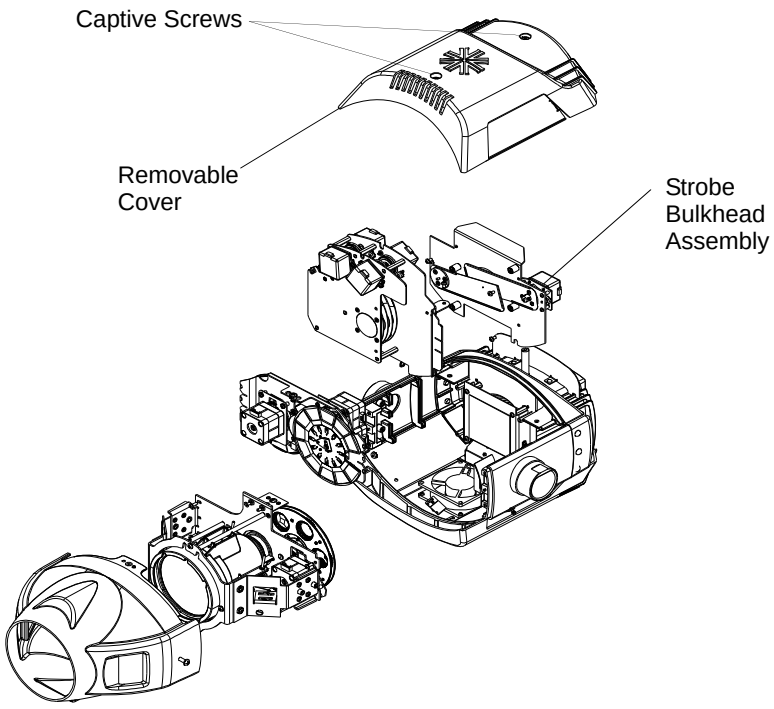


Figure 2-5: Dimmer Bulkhead Replacement

Front Assembly Removal

This procedure may be necessary to gain access to other components.

To remove and re-install front assembly:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At head cover, turn two captive screws one-quarter turn and remove cover. (It will remain attached by tether.) **Figure 2-6**.

Step 3. Remove front nose cover by removing two 10-32×1/2" PPB screws (one on each side).

Step 4. At front assembly, disconnect wire connectors from rotating gobo index motor and rotating gobo wheel motor.

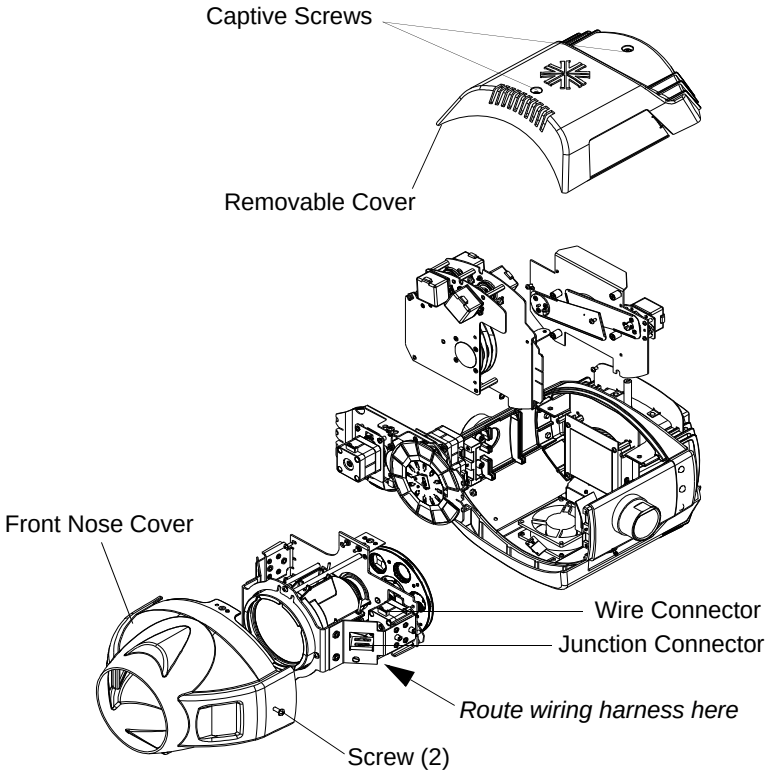


Figure 2-6: Front Assembly Removal

Step 5. At junction connector, disconnect edge motor and zoom motor wires.

Step 6. Face head nose upward. At front of bulkhead, using #2 Phillips long handle screwdriver, remove four 6-32 X 3/8" PPB screws, and pull front assembly partially out of head assembly.

Step 7. At rear of bulkhead, disconnect wires from rotating gobo sensor PCB. **Figure 2-7**.

Step 8. Re-install front assembly by performing Steps 2–6 in reverse order. While re-installing, first connect wiring harness connection to rotating gobo wheel sensor and route wires through corner between head assembly and bulkhead (ensuring no wires are pinched).

Rotating Gobo Sensor PCB Replacement

Parts:

24.9667.1321 PCB ASSY, SENSOR ROTATING GOBO

To remove and replace rotating gobo sensor PCB:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Remove front assembly. Refer to "Front Assembly Removal" on page 21.

Step 3. At rotating gobo wheel, remove two 4-40×3/8" PFZ screws (do not remove middle screw) and remove wheel. **Figure 2-7**.

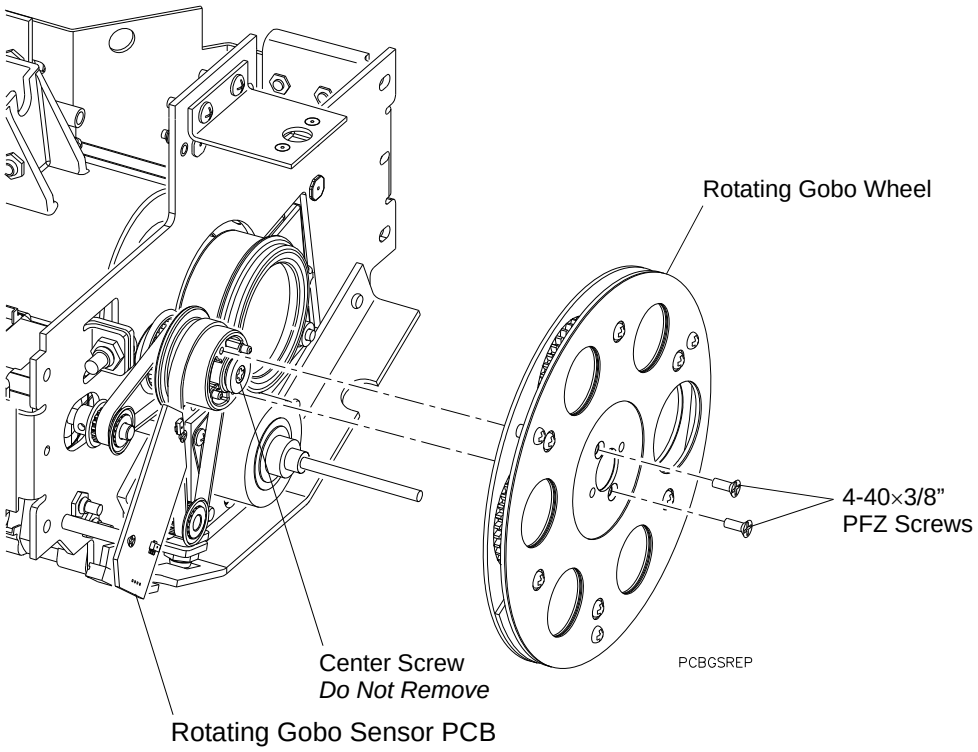


Figure 2-7: Rotating Gobo Wheel Removal

CAUTION: Always use anti-static precautions when working with PCBs.

Step 4. Remove rotating gobo sensor PCB by removing two 4-40×1/4" PFZ screws. **Figure 2-8**.

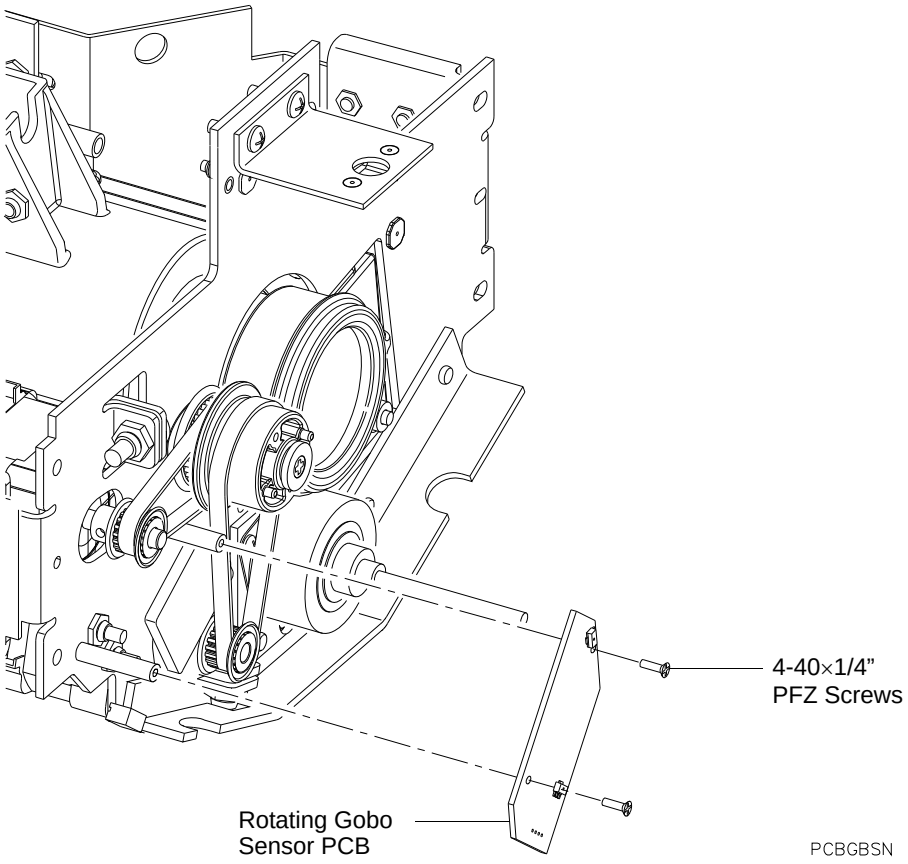


Figure 2-8: Rotating Gobo Sensor PCB Replacement

Step 5. Install replacement assembly by performing Steps 2–4 in reverse order.

Edge Motor Assembly Replacement

Parts:

21.9667.0310 ASSY, MOTOR EDGE

To remove and replace edge motor assembly:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Remove front assembly. Refer to "Front Assembly Removal" on page 21.

Step 3. Cut cable ties which secure edge motor wires to front assembly. (Edge motor is larger of two linear actuator motors.)

Step 4. The rotating gobo wheel obscures one of the screws securing the edge motor assembly to the front assembly. At rotating gobo wheel, turn gobo wheel until the open frame is over head of obscured screw. **Figure 2-9**.

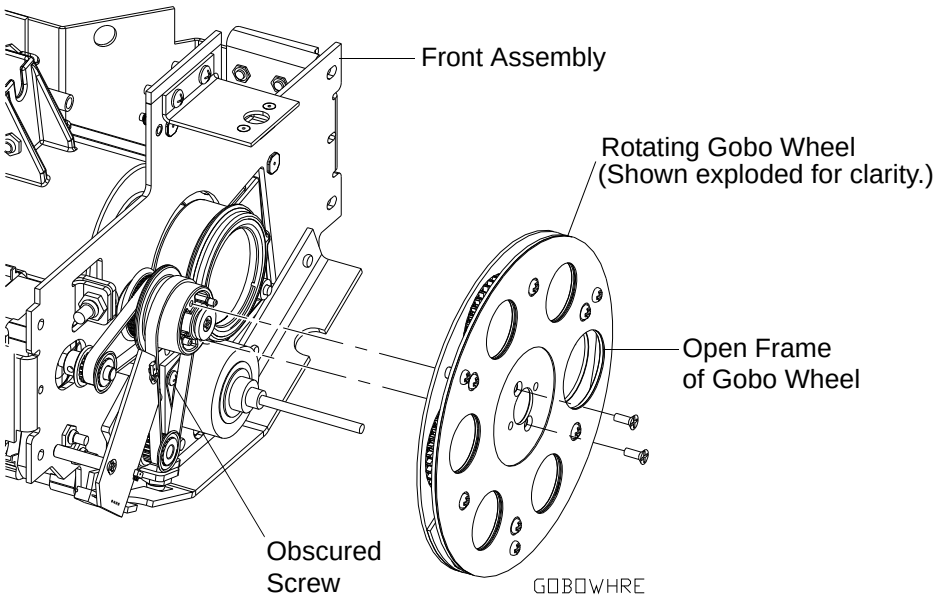


Figure 2-9: Accessing Edge Motor Assembly Attaching Hardware

CAUTION: Ensure you place pliers on standoff on edge motor shaft. Do not hold edge motor shaft with pliers, or shaft may be damaged.

Step 5. At lens barrel assembly, use pliers to hold standoff on edge motor shaft, and using 1/4" open-ended wrench, remove 4-40 SS KEPS nut from end of motor shaft. **Figure 2-10**.

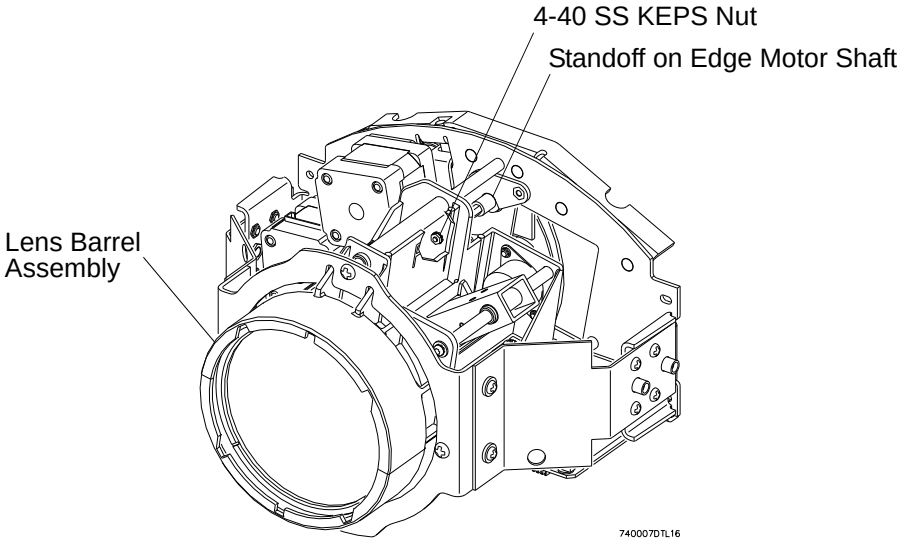


Figure 2-10: Removing Nut From Edge Motor Assembly Shaft

Step 6. At side rail, disconnect edge motor wire connector from junction connector. **Figure 2-11**.

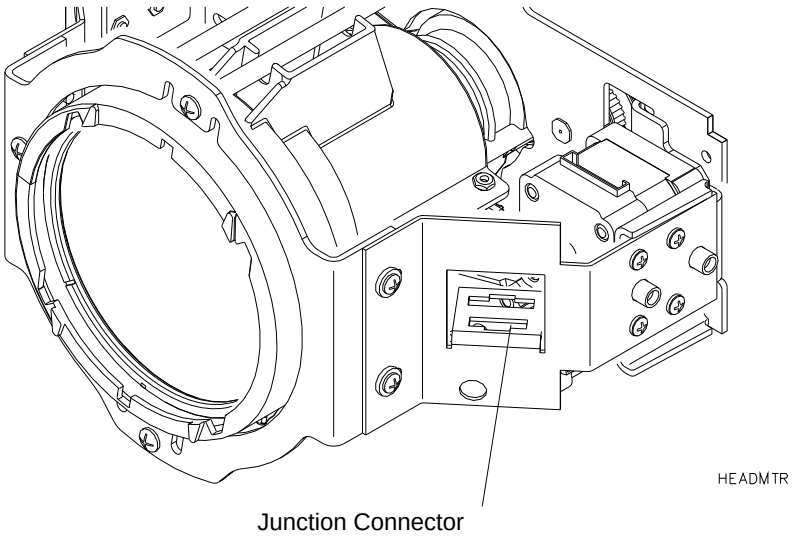


Figure 2-11: Disconnecting Edge Motor Wiring

Step 7. Remove two 4-40×3/8" PPZ screws and nuts which secure motor to bulkhead and remove motor assembly. **Figure 2-12**.

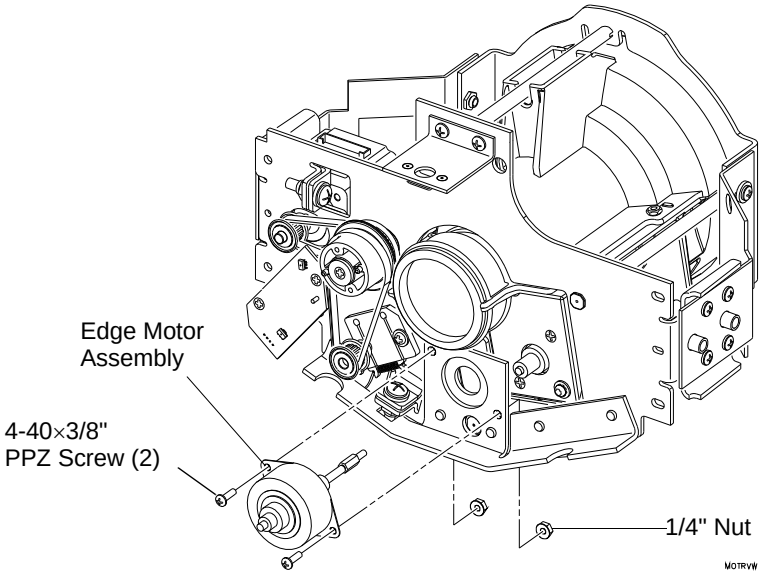


Figure 2-12: Edge Motor Assembly Replacement

Step 8. Install replacement assembly by performing Steps 2–7 in reverse order.

Lens Barrel Assembly Replacement

Parts:

21.9676.4306 ASSY, LENS BARREL

To remove and replace lens barrel assembly:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At head cover, turn two captive screws one-quarter turn and remove cover. (It will remain attached by tether.) **Figure 2-6**.

Step 3. Remove front nose cover by removing two 10-32×1/2" PPB screws (one on each side). **Figure 2-6**.

Step 4. Cut cable ties which secure zoom optics motor wires to front assembly. (Zoom optics motor is smaller of two linear actuator motors.)

Step 5. At lens barrel assembly, use pliers to hold standoff on edge motor shaft, and using 1/4" open-ended wrench, remove 4-40 SS KEPS nut from end of motor shaft. **Figure 2-10**.

Step 6. Disconnect zoom optics motor wire connector from junction connector. **Figure 2-13**.

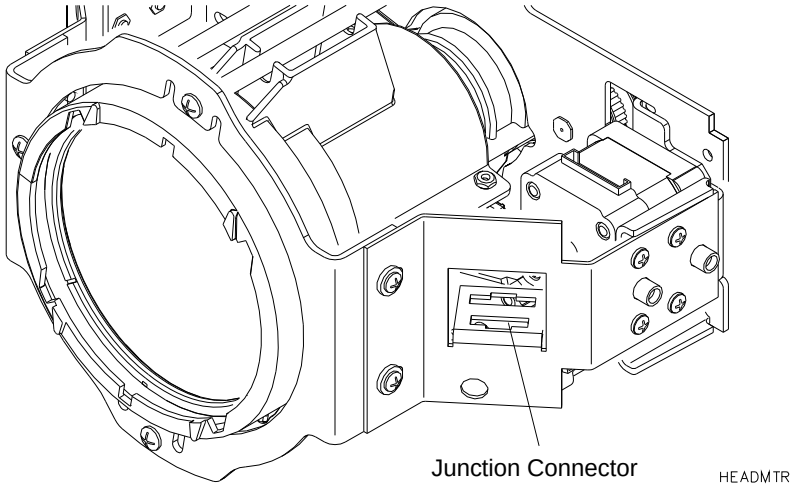


Figure 2-13: Disconnecting Zoom Optics Motor Wiring

Step 7. At front of optical support ring, remove three 8-32×3/8" PPZ screws. **Figure 2-14**.

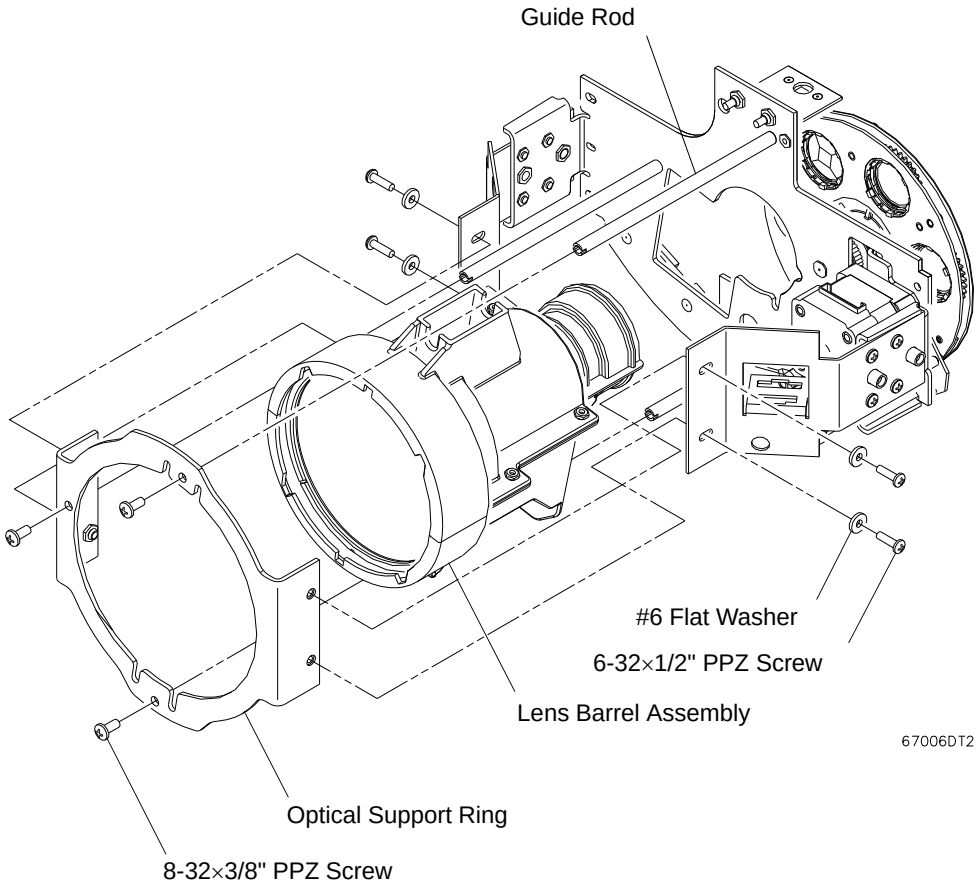


Figure 2-14: Lens Barrel Assembly Replacement

Step 8. At each side of optical support ring, remove two 6-32×1/2" PPZ screws and #6 flat washers. Remove optical support ring.

Step 9. Remove lens barrel assembly by pulling straight out from front assembly along guide rods.

Step 10. Install replacement assembly by performing Steps 2–9 in reverse order.

Yoke Assembly

This section provides removal and replacement procedures for components found in the luminaire yoke assembly.

Tilt Motor Assembly Replacement

Parts:

22.9676.0610 ASSY, TILT MOTOR

To replace tilt motor assembly:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At tilt-side leg, remove yoke leg cover by removing four (two on each side) 6-32×5/16" PPB screws. **Figure 2-15**. To find tilt-side leg, refer to page 8.

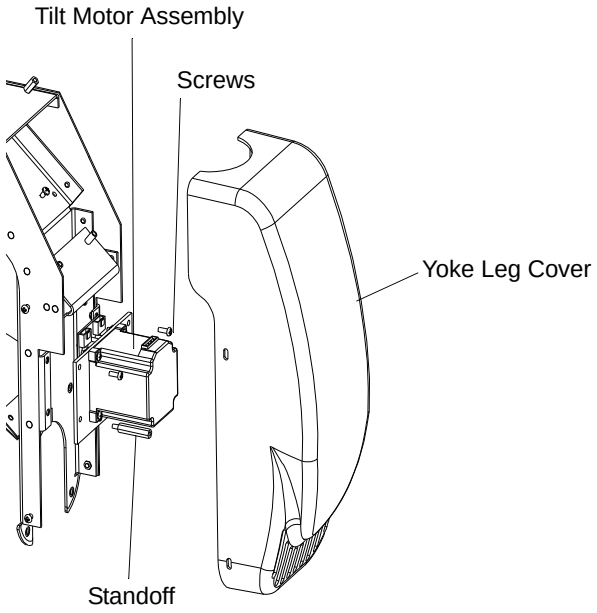


Figure 2-15: Tilt Motor Assembly Replacement

Step 3. At pan/tilt encoder PCB (mounted behind tilt motor mounting plate), disconnect two cable connectors.

Step 4. At tilt motor, disconnect motor wire connector.

Step 5. Using 1/4" nutdriver, remove 1/4" hex standoff.

Step 6. Remove three remaining 6-32×5/16" PPZ screws securing tilt motor assembly to yoke leg and remove assembly while freeing pulley from belt.

Step 7. Install replacement assembly by performing Steps 2–6 in reverse order.

Main Control Board (MCB) PCB Replacement

Parts:

24.9676.3730 MCB PCB ASSY

To replace an MCB PCB:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At board-side leg, remove yoke leg cover by removing four 6-32×5/16" PPB screws. To find board-side leg, refer to page 8.

CAUTION: Always use anti-static precautions when working with PCBs.

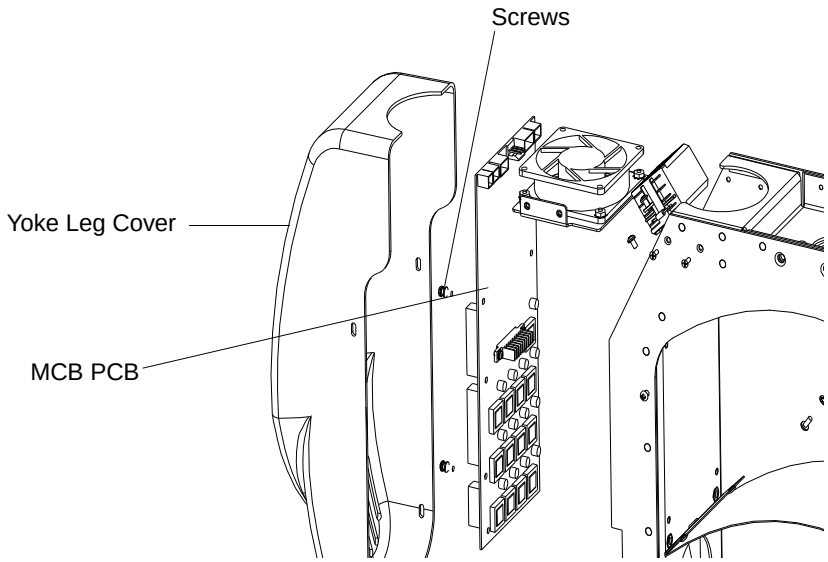


Figure 2-16: MCB PCB Replacement

Step 3. Disconnect wiring harness connectors J8, J9, and J11.

Step 4. Remove four (4) 6-32 screws securing MCB PCB

Step 5. Disconnect upper enclosure connectors at back of MCB.

Step 6. Install replacement assembly by performing Steps 2–5 in reverse order.

Ignitor PCB Replacement

Parts:

24.9661.1126 PCB ASSY, SOLID STATE IGNITOR

To replace ignitor PCB:

Step 1. Disconnect luminaire AC input cable from power source.

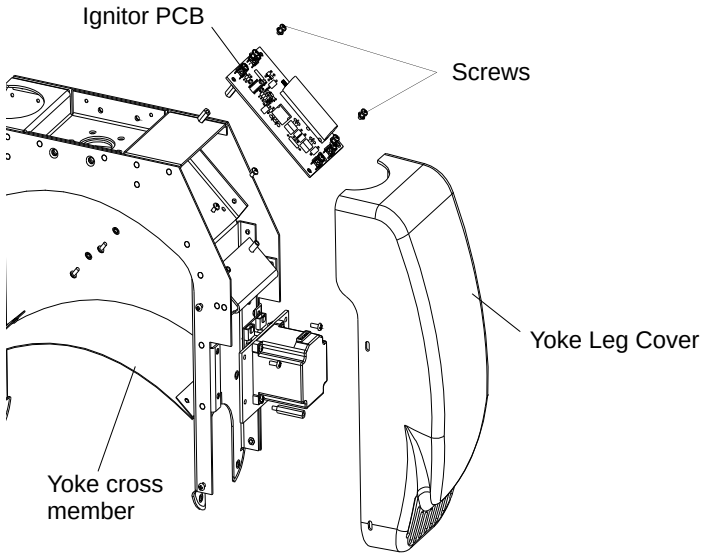


Figure 2-17: Ignitor PCB Replacement

Step 2. At each yoke leg, remove yoke leg cover by removing four 6-32×5/16" PPB screws. **Figure 2-17**.

Step 3. Remove MCB PCB (See “Main Control Board (MCB) PCB Replacement” on page 30.).

Step 4. At yoke cross member, remove four 6-32×3/16" LG PPZ screws and associated washers which secure cross member cover to yoke and remove cover. (These screws are accessible from inside yoke legs.)

CAUTION: Always use anti-static precautions when working with PCBs.

Step 5. At Ignitor PCB, remove two accessible screws which secure PCB to yoke leg.

Step 6. At yoke cross member, remove two 6-32×5/16" PPZ screws and washers which secure ignitor PCB standoffs to yoke leg.

Step 7. Disconnect ignitor PCB wires by removing four screws which secure wire ring terminals to PCB and remove ignitor PCB.

Step 8. Remove two 1/4" hex standoffs from ignitor PCB by removing one 6-32×5/16" PPZ screw and #6 lock washer. Install in same place on new ignitor PCB. **Figure 2-18**.

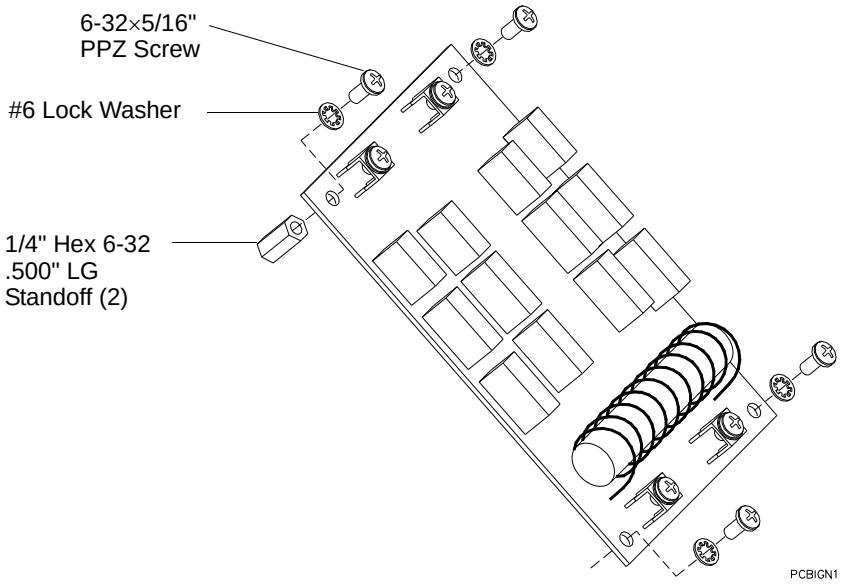


Figure 2-18: Ignitor PCB Standoff Removal

Step 9. Install replacement assembly by performing Steps 2-17–8 in reverse order.

Enclosure Assembly

This section provides removal and replacement procedures for components found in the luminaire enclosure assembly.

Removing Enclosure Covers

To gain access to enclosure components, it will be necessary to remove the top and bottom covers.

To remove and replace enclosure covers:

Step 1. Using console or internal menus, run lens as far to the rear as possible.

Step 2. Disconnect luminaire AC input cable from power source.

Step 3. At each top enclosure cover, remove two 6-32×1/4" PPB screws and remove cover. **Figure 2-19**.

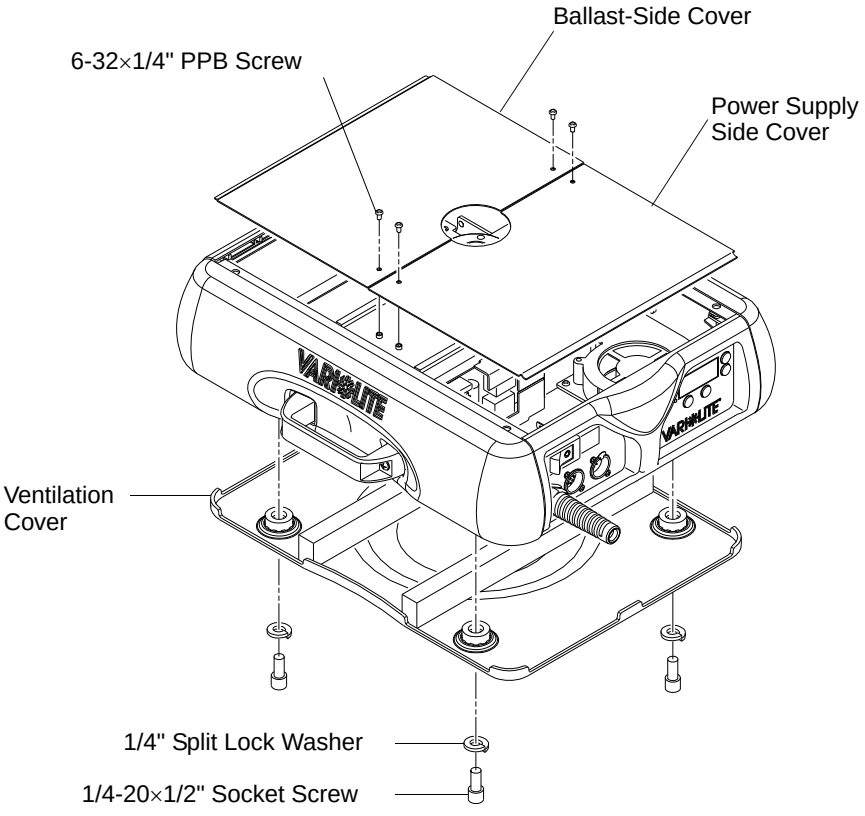


Figure 2-19: Removing Top and Bottom Enclosure Covers

CAUTION: Be careful not to damage lens during next step.

Step 4. Carefully lay luminaire on its side, ensuring that lens does not come into contact with any surface. **Figure 2-20**.

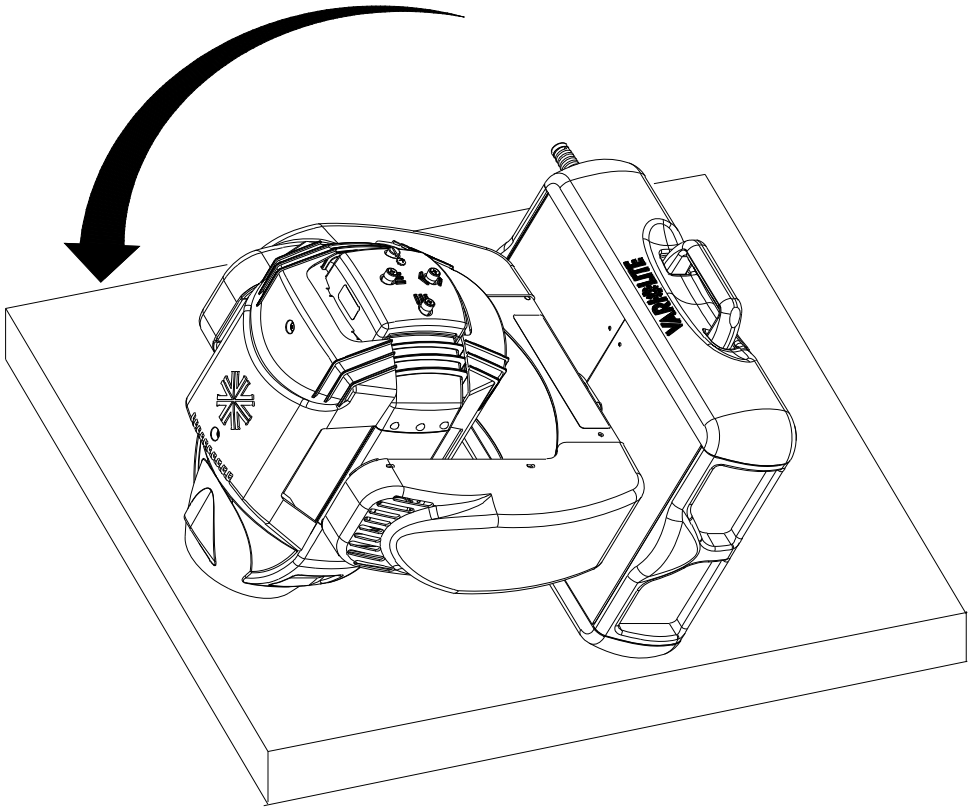


Figure 2-20: Laying Luminaire on Its Side

Step 5. At bottom of enclosure, remove four 1/4-20 × 1/2" socket screws and 1/4" split lock washers and remove ventilation cover.

Step 6. Return luminaire to upright position.

Ballast Module Assembly Replacement

Parts:

69.9676.0700	ASSY, BALLAST MODULE, 700W ARC

To remove the ballast module assembly:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At enclosure, remove ballast-side and ventilation covers. Refer to "Removing Enclosure Covers" on page 33.

Step 3. Remove both handles by removing two 10-32 X 5/8" PPB screws at each.

Step 4. At enclosure, remove eight 6-32×3/8" PPZ screws and both side covers. **Figure 2-21**.

Step 5. At enclosure, remove APS side bracket and front cover from ballast side.

Note: Please note different size screws and their respective locations.

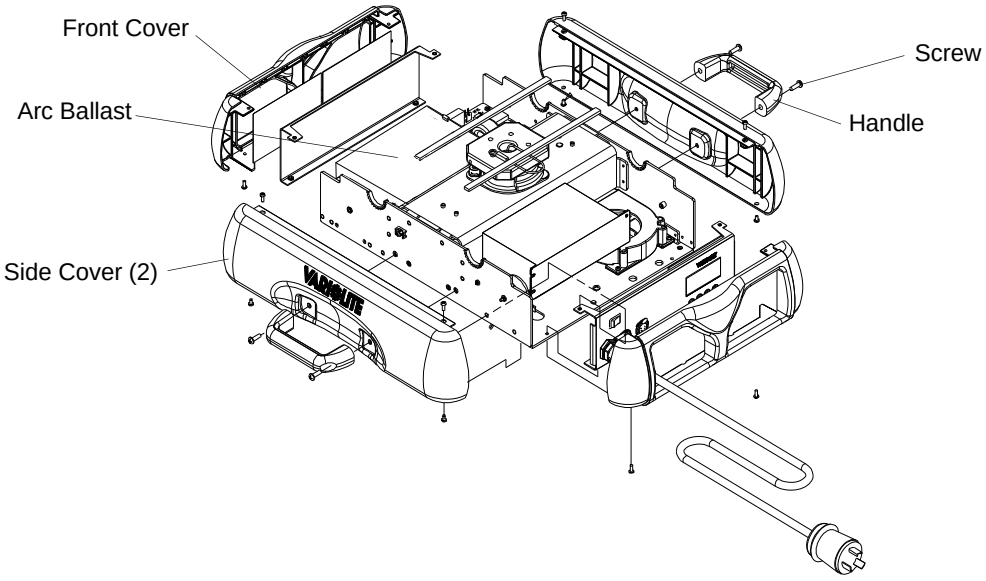


Figure 2-21: Accessing Ballast Module

Step 6. At ballast, disconnect wiring:

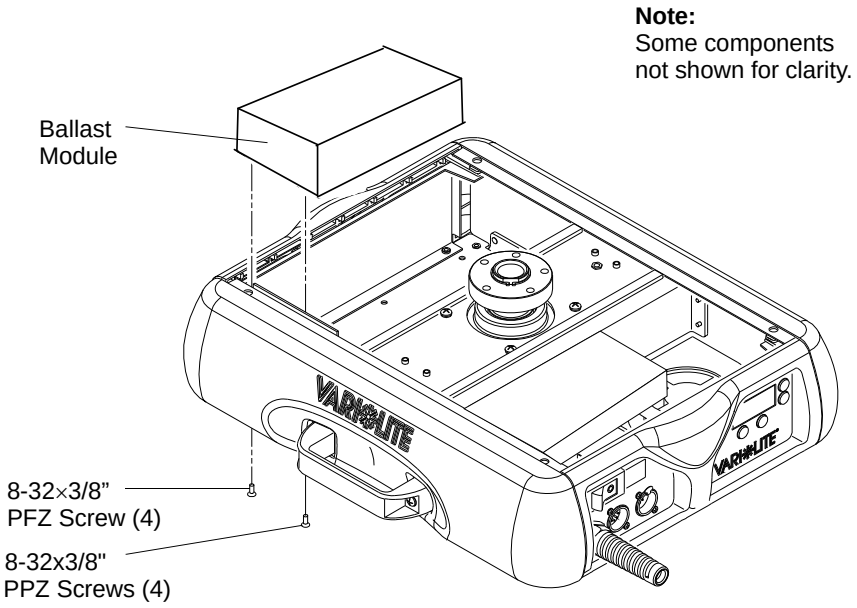


Figure 2-22: Ballast Module Assembly Replacement

Step 7. At bottom of enclosure, remove four 8-32×3/8" PFZ screws and four 8/32x3/8" PPZ screws that secure ballast module to enclosure.

Step 8. Remove ballast module.

Step 9. Install replacement assembly by performing Steps 2–8 in reverse order.

Pan Motor Assembly Replacement

Parts:

21.9678.0864 PAN MOTOR ASSY

Procedure:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Carefully lay luminaire on its side to have access to bottom of enclosure.

Step 3. At enclosure assembly, remove bottom cover.

Step 4. Remove two connectors to pan encoder board.

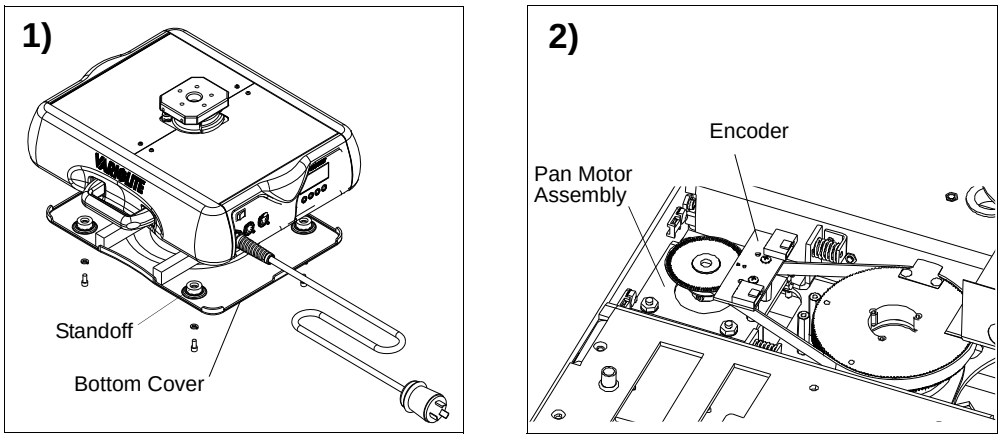
Step 5. Remove four screws securing pan motor to chassis

Step 6. Carefully lift motor upwards and remove tensioning springs.

Step 7. Slide belt from around gears.

Step 8. Unplug motor connector and remove motor.

Step 9. Install in reverse order. Make sure bottom cover standoffs are seated fully against chassis.



NOTE:
Head not shown for clarity.

Figure 2-23: Pan Motor Assembly Replacement

Pan Encoder Replacement

Parts:

24.9678.9729 PAN ENCODER

Procedure:

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Carefully lay luminaire on its side to have access to bottom of enclosure.

Step 3. At enclosure assembly, remove bottom cover.

Step 4. Remove pan encoder board.

Step 5. Install in reverse order. Make sure bottom cover standoffs are seated fully against chassis.

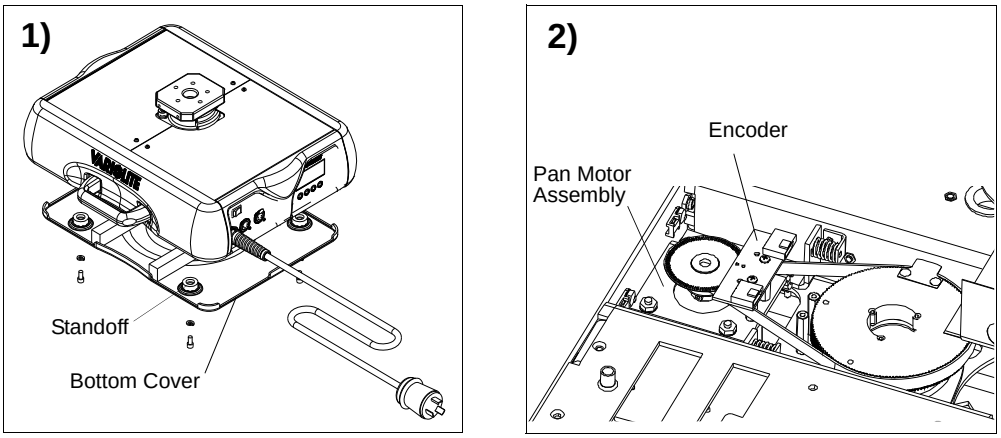


Figure 2-24: Pan Encoder Replacement

Pan EOT Sensor Replacement

Parts:

86.7002.0003 PAN EOT SENSOR ASSY

Repair Procedure

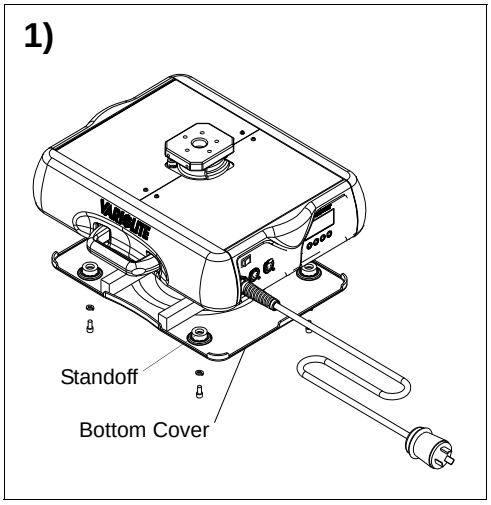
Step 1. Disconnect luminaire AC input cable from power source.

Step 2. Carefully lay luminaire on its side.

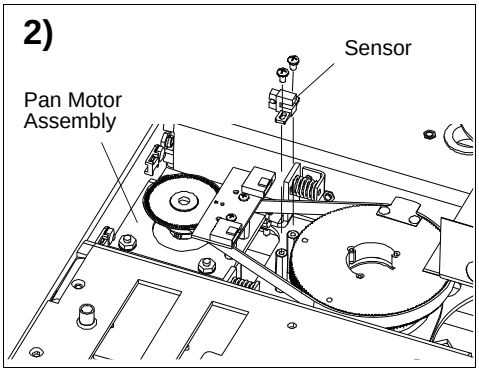
Step 3. At enclosure assembly, remove bottom cover.

Step 4. Remove pan sensor.

Step 5. Install in reverse order. Make sure bottom cover standoffs are seated fully against chassis.



NOTE:
Head not shown for clarity.



Enclosure Bottom View

Figure 2-25: Pan EOT Sensor Replacement

Power Supply (LVS) Replacement

Parts:

69.3177.0151 POWER SUPPLY (LVS) ASSY

Repair Procedure

Step 1. Disconnect luminaire AC input cable from power source.

Step 2. At enclosure, remove top cover at power supply side.

Step 3. At LVS, remove wiring.

Step 4. Remove screw closest to pan tube. Loosen two screws at opposite end of wiring.

Step 5. Remove LVS.

Step 6. Install in reverse order. Make sure that no wires get pinched or caught in fan assembly.

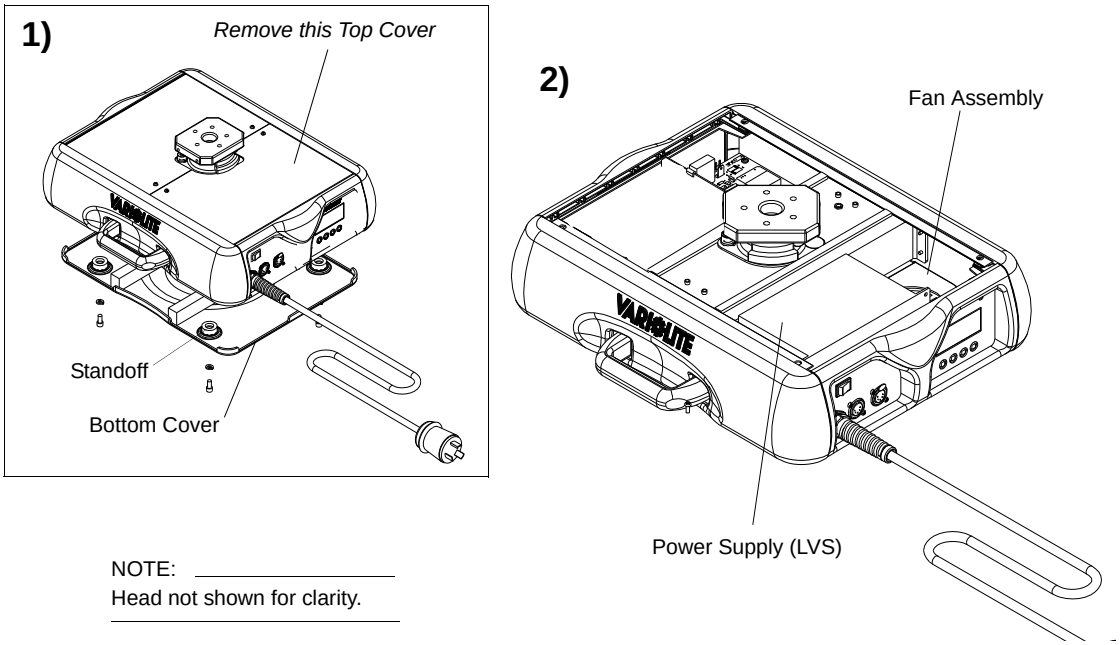


Figure 2-26: Power Supply (LVS) Replacement

CHAPTER 3.

Illustrated Parts Breakdown

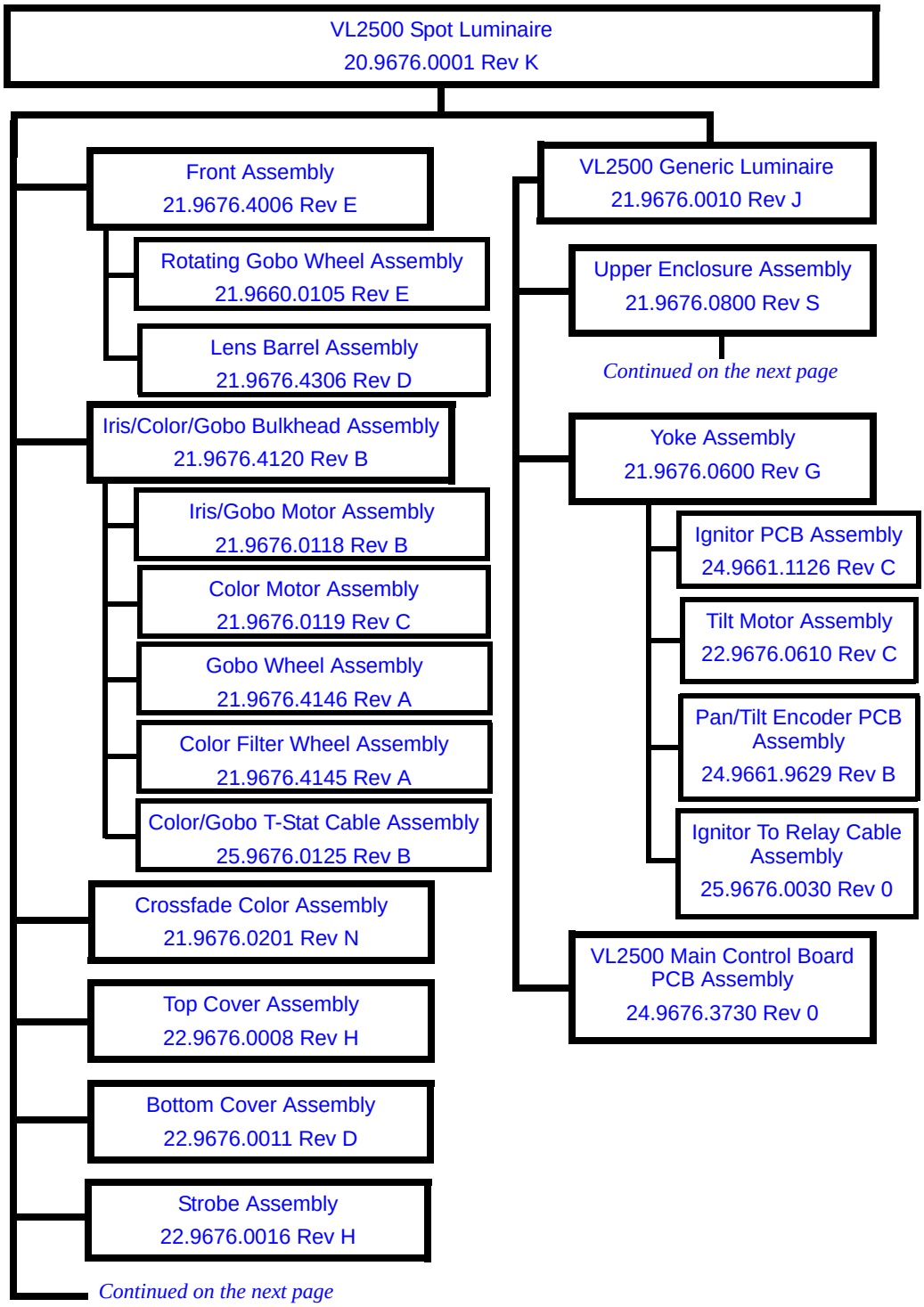
This chapter contains illustrated parts breakdowns for assemblies in the VL2500™ Spot Luminaire.

- **Drawing Tree**
- **Top Assembly**
- **Yoke**
- **Enclosure**
- **Cables**

SERVICE

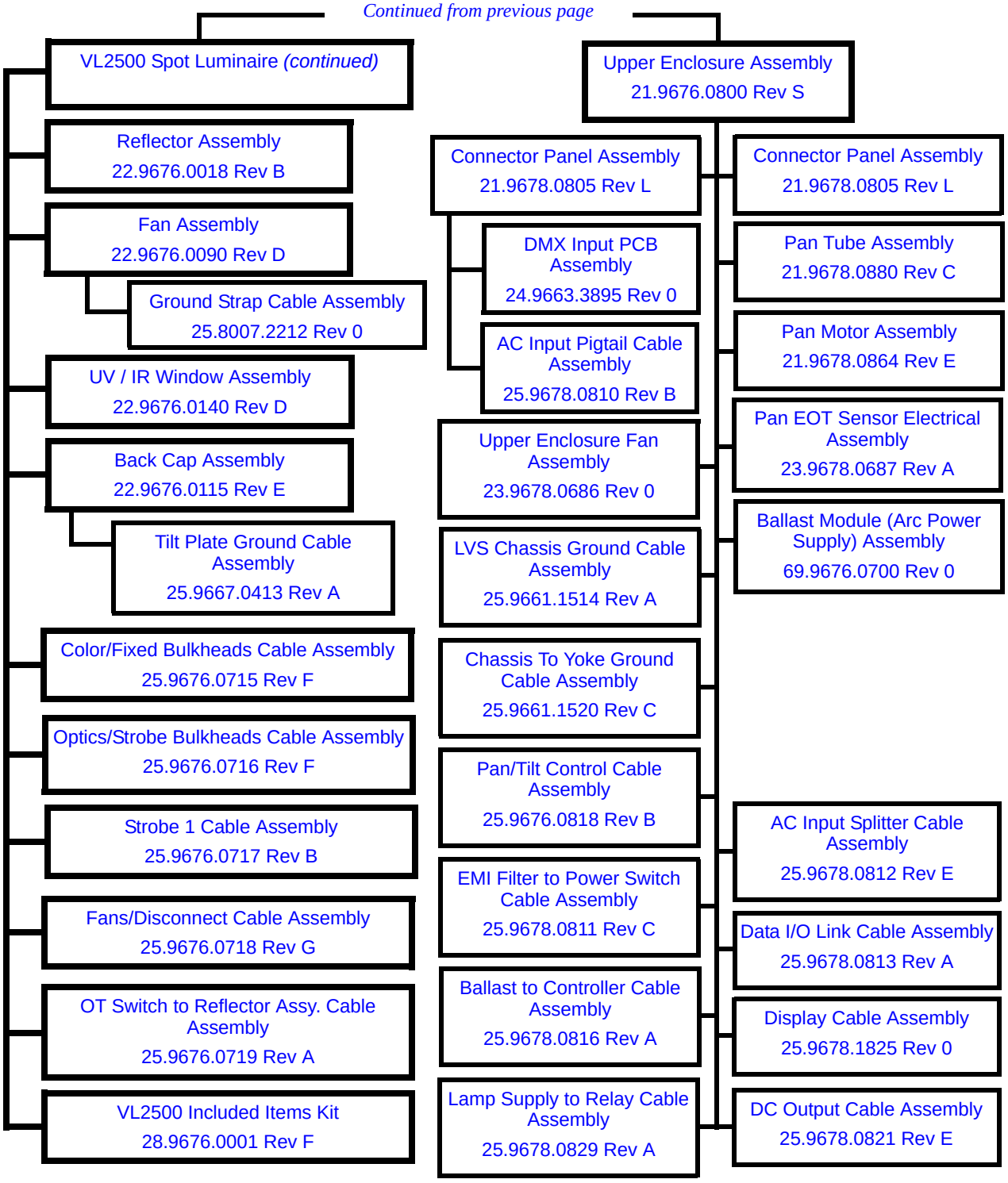
Drawing Tree

VL2500 Series Spot Luminaire



Drawing Tree (continued)

Continued from previous page



Top Assembly

VL2500 Included Items Kit

28.9676.0001 Rev F

Refer to Figure 3-1.

No.	Item	Qty.	UM.	Description
1	02.8001.0001	1	EA	PRODUCT SUPPORT SHEET, VARI-LITE CUSTOMER SERVICE
2	02.8052.0001	1	EA	CARD, LIMITED WARRANTY
-	02.80001.0002	1	EA	VARI-LITE QUALITY ASSURANCE CERTIFICATE (**not shown**)
3	02.8406.0001	1	EA	TAG, LAMP NOTICE
4	02.8700.0001	1	EA	CARD, PRODUCT REGISTRATION - 2000 SERIES (09-09-02)
5	02.9676.0002	1	EA	UNPACK/QUICK START SHEET, VL2500
-	04.9676.0001	2	EA	SHIPPING BOX LABELS, VL2500 SPOT (**not shown**)
-	04.4037.0001	5	EA	LABELS, 2.5 X .5 (**not shown**)
6	07.9661.0018	1	EA	SHIPPING BOX, CARDBOARD - VL2500
	07.5044.0001	1	EA	BAG, DESICCANT, SHIPPING BOX (**not shown**)
7	06.6073.0001	1	EA	FOAM
8	08.2500.0001	1	EA	CD-ROM, VL2500 LUMINAIRE PRODUCT DOCUMENTATION
9	22.9661.1636	2	EA	FAB ASSY, BRACKET TRUSS HOOK
10	71.2528.0700	1	EA	700 WATT SHORT ARC-PHILIPS MSR575HR LAMP
-	04.9678.1000	1	EA	LABEL, WHITE, ROHS COMPLIANCE
-	04.9678.1001	2	EA	LABEL, GREEN, ROHS COMPLIANCE

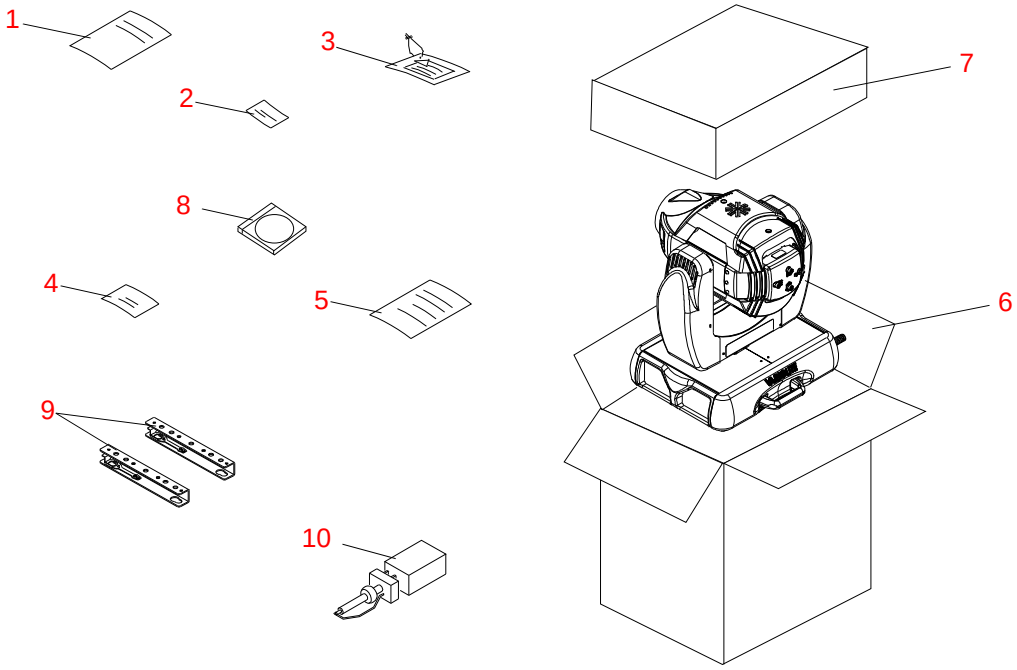


Figure 3-1: Included Items Kit

VL2500 Spot Luminaire

20.9676.0001 Rev K

Refer to Figure 3-2.

No.	Item	Qty.	UM.	Description
1	10.9638.0052	1	EA	DAM, AIR, VL6
2	10.9676.8632	2	EA	COVER, YOKE THERMOFORM
3	16.9676.0004.01	1	EA	LABEL LOCATION, VL2500 LUMINAIRE (**not shown**)
4	21.9676.0023	1	EA	ASSY, FRONT COVER
5	21.9676.4006	1	EA	ASSY, FRONT
6	21.9676.0010	1	EA	GENERIC LUMINAIRE, VL2500
7	21.9676.4120	1	EA	BULKHEAD ASSY, IRIS/COLOR/GOBO
8	21.9676.0201	1	EA	ASSY, CROSSFADE COLOR
9	22.9676.0008	1	EA	ASSY, TOP COVER
10	22.9676.0011	1	EA	ASSY, BOTTOM COVER
11	22.9676.0016	1	EA	ASSY, STROBE
12	22.9676.0018	1	EA	ASSY, REFLECTOR
13	22.9676.0090	1	EA	ASSY, FAN
14	22.9676.0115	1	EA	ASSY, BACK CAP
15	22.9676.0140	1	EA	ASSY, UV / IR WINDOW
-	25.9676.0715	1	EA	CABLE ASSY, COLOR / FIXED (**not shown**)
-	25.9676.0716	1	EA	CABLE ASSY, OPTICS / STROBE (**not shown**)
-	25.9676.0717	1	EA	CABLE ASSY, STROBE 1 (**not shown**)
-	25.9676.0718	1	EA	CABLE ASSY, FAN / DISCONNECT (**not shown**)
-	25.9676.0719	1	EA	CABLE ASSY, OT SWITCH TO REFLECTOR ASSY (**not shown**)
-	28.9676.0001	1	EA	INCLUDED ITEMS KIT, VL2500 LUMINAIRE (**not shown**)
16	53.2200.0006	1	EA	NUT, KEPS #6-32 SS
17	53.6523.0013	8	EA	SCREW, 6-32 X 3/8" PTB
18	53.6558.0009	6	EA	SCREW, 6-32 X 3/8" PPZ, SEMS
19	53.6558.0010	10	EA	SCREW, 6-32 X 1/4" PPB, SEMS
20	53.6607.0001	2	EA	SCREW, 6-32 X 1/4" PPB
21	53.6625.0001	2	EA	SCREW, 10-32 X 1/2" PPB
22	67.4018.0001	1	EA	FERRITE, 26 X 28.5 X 13MM, CYL
23	55.2178.0001	1	EA	ANCHOR, CABLE MOUNT, #8 SCREW
24	55.6669.0017	4	EA	STANDOFF, 1/4" HEX, 6-32, 1.062"

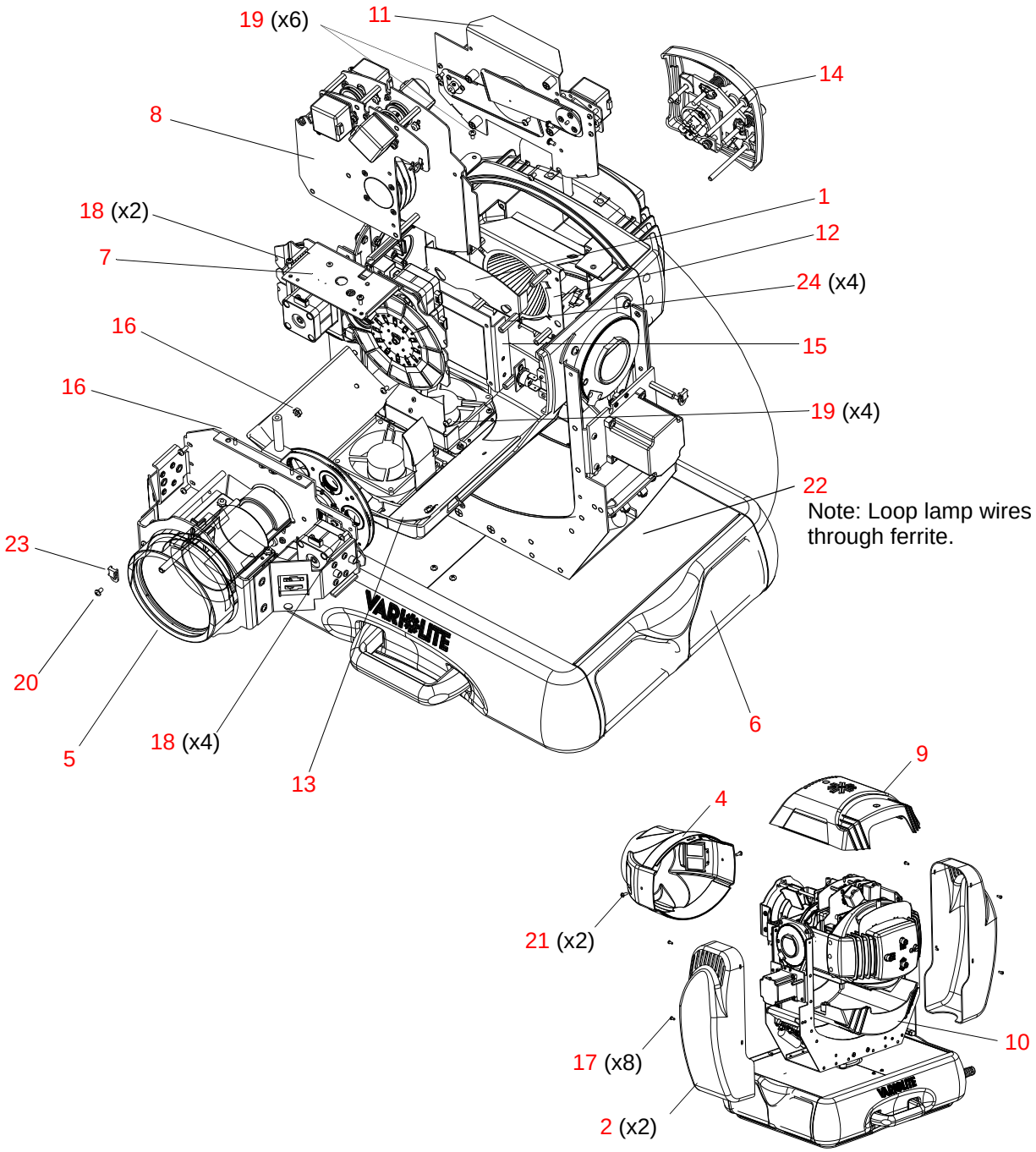


Figure 3-2: Top Assembly

VL2500 Generic Luminaire

21.9676.0010 Rev J

Refer to Figure 3-3.

No.	Item	Qty.	UM.	Description
1	10.9628.0211	1	EA	STABLIZER, PAN/TILT
2	10.9676.8617	1	EA	HEATSHIELD, YOKE CROSSMEMBER
3	10.9676.0083	1	EA	BAFFLE, REAR CASTING
4	10.9676.0163	1	EA	HARNESS, GUARD, RIGHT
5	10.9676.0161	1	EA	HARNESS, GUARD, LEFT
6	21.9676.0139	1	EA	ASSY, REAR HEAD
7	21.9676.0600	1	EA	ASSY, YOKE
-	25.9667.0028	1	EA	CABLE ASSY, YOKE TO HEAD GROUND (NOT SHOWN)
8	21.9676.0800	1	EA	UPPER ENCLOSURE
9	24.9676.3730	1	EA	ASSY, VL2500 MAIN CONTROL BOARD (MCB)
10	53.6505.0020	5	EA	BOLT, 1/4-28 X 3/4" HX HD GRD 8
11	53.6517.0001	8	EA	SCREW, 10-32 X 3/8" PPZ
12	53.6526.0001	1	EA	SCREW, 6-32 X 5/8" PPZ
13	53.6530.0006	2	EA	RIVET, POP, 1/8" OD X .188-.250" G
14	53.6539.0008	5	EA	WASHER, 1/4" FLAT
15	53.6553.0008	4	EA	SCREW, 10-32 X 9/16" PFB
16	53.6558.0009	4	EA	SCREW, 6-32 X 3/8" PPZ SEMS
17	53.6558.0010	8	EA	SCREW, 6-32 X 1/4" PPB SEMS
18	53.6682.0025	1	EA	SCREW, 8-32 X 5/8" PPZ SEMS
19	54.2039.0001	1	EA	BELT, GT TIMING 2 MM PITCH 182 GRV
20	55.2114.0001	8	EA	WASHER, #10 LOCK INT. TOOTH
21	55.6549.0001	5	EA	WASHER, 1/4" SPLIT LOCK
22	55.6603.0001	1	EA	SPRING, EXTENSION
23	55.6663.0007	1	EA	STANDOFF, 3/8" RND., 1.75" LG FF
24	55.6677.0033	4	EA	WASHER, .281" OD, .125 ID, .032 THK

VL2500 Generic Luminaire (continued)

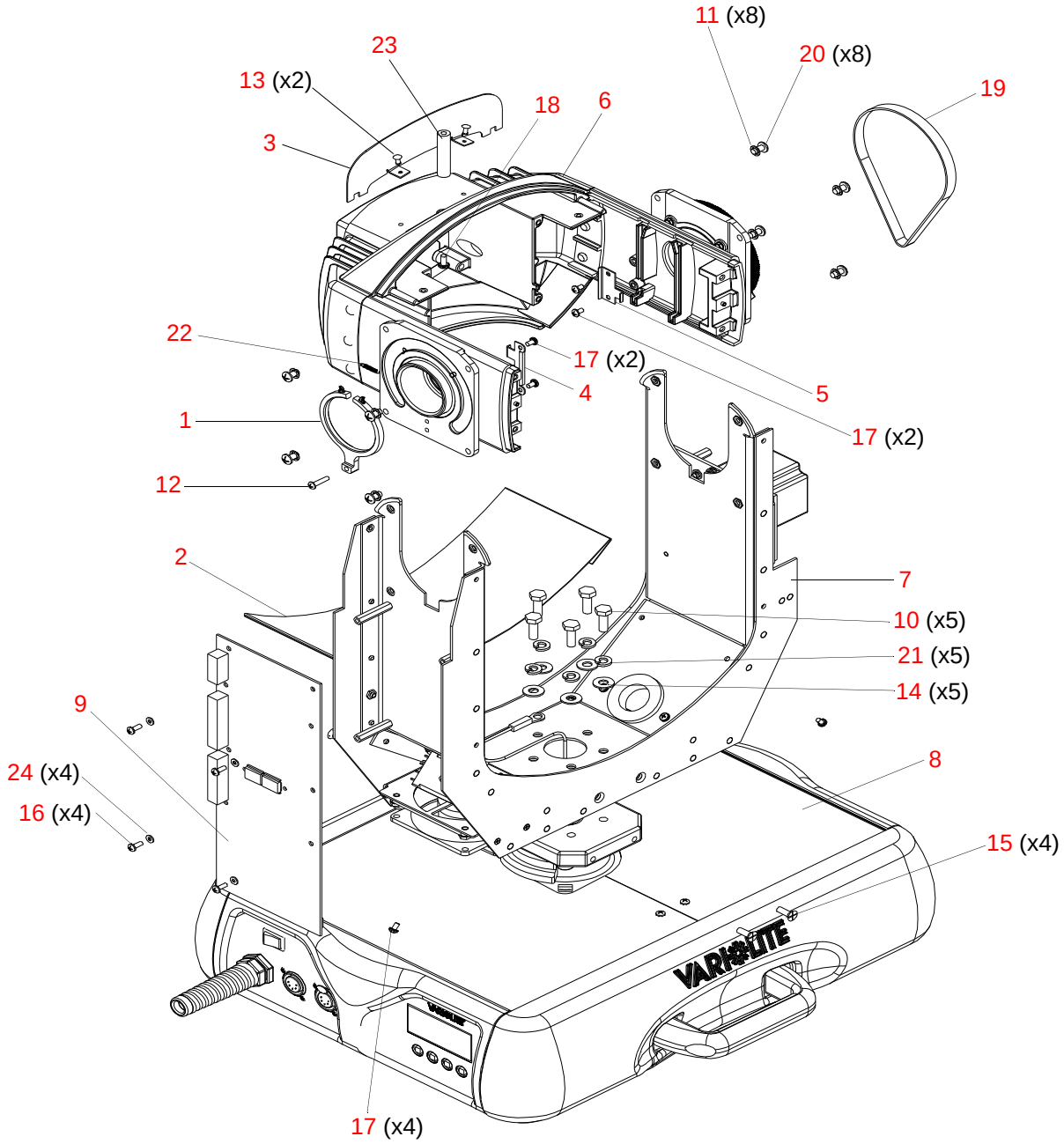


Figure 3-3: VL2500 Generic Luminaire Assembly

Front Assembly

21.9676.4006 Rev F

Refer to Figure 3-4.

No.	Item	Qty.	UM.	Description
1	10.9660.0129	1	EA	SHAFT STOP, ROTATING GOBO WHEEL
2	10.9660.0130	1	EA	SHAFT, ROTATING GOBO WHEEL
3	10.9660.0219	1	EA	SHAFT 1, FOCUS BEARING
4	10.9676.4255	2	EA	SHAFT, SUPPORT, LENS
5	10.9660.0263	1	EA	SUPPORT, LENS
6	10.9667.0313	1	EA	SUPPORT, LENS, CABLE MOUNT
7	10.9676.4349	1	EA	SUPPORT RING, OPTICAL
8	10.9676.4355	1	EA	BRACKET, COVER MOUNTING
9	21.9660.0105	1	EA	ASSY, ROTATING GOBO WHEEL
10	21.9676.4306	1	EA	ASSY, LENS BARREL
11	21.9667.0310	1	EA	ASSY, MOTOR EDGE
12	22.9676.0316	1	EA	BULKHEAD, LENS MOUNTING
13	22.9676.0152	1	EA	ASSY, TENSION BRACKET MOTOR INDEX
14	22.9676.0153	1	EA	ASSY, TENSION BRACKET MOTOR WHEEL
15	24.9667.3321	1	EA	PCB ASSY, SENSOR ROTATING GOBO
16	53.2200.0004	1	EA	NUT, 4-40 KEPS SS
17	53.6515.0001	2	EA	SCREW, 10-32 X 3/4" SCB CAP
18	53.6520.0001	3	EA	SCREW, 4-40 X 3/8" PPZ
19	53.6545.0004	3	EA	SCREW, 8-32 X 3/8" PPZ
20	53.6558.0007	1	EA	SCREW, 4-40 X 1/4" PPZ, SEMS
21	53.6559.0001	3	EA	SCREW, 4-40 X 1/4" PFZ
22	53.6558.0001	2	EA	SCREW, 6-32 X 3/8" LG PPZ
23	53.6608.0003	8	EA	SCREW, 6-32 X 3/16" LG PPZ
24	53.6613.0001	6	EA	SCREW, 6-32 X 1/2" PPZ
25	53.6682.0022	1	EA	SCREW, 8-32 X 3/8" PPZ, SEMS
26	54.2029.0001	1	EA	BELT, TIMING MXL .080" PITCH 70 GRV 3/16" WD KEVLAR
27	54.2032.0001	1	EA	BELT, TIMING MXL .080" PITCH 87 GRV 3/16" POLY CORD WD
28	55.2118.0004	1	EA	WASHER, .735" OD .395" ID .011" THK CURVD SPRNG
29	55.2118.0005	1	EA	WASHER, .735" OD .395" ID .016" THK CURVD SPRNG
30	55.3301.0006	4	EA	WASHER, #6 FLAT SS
31	55.3301.0010	2	EA	WASHER, #10 FLAT

No.	Item	Qty.	UM.	Description
32	55.6506.0009	1	EA	SPACER, 1/2" RND .125" LG .375" ID SHAFT
33	55.6589.0003	2	EA	STANDOFF, 1/4" RND 4-40 .606" LG MF
34	55.6663.0007	1	EA	STANDOFF, 3/8" RND, 1.75" LG, FF

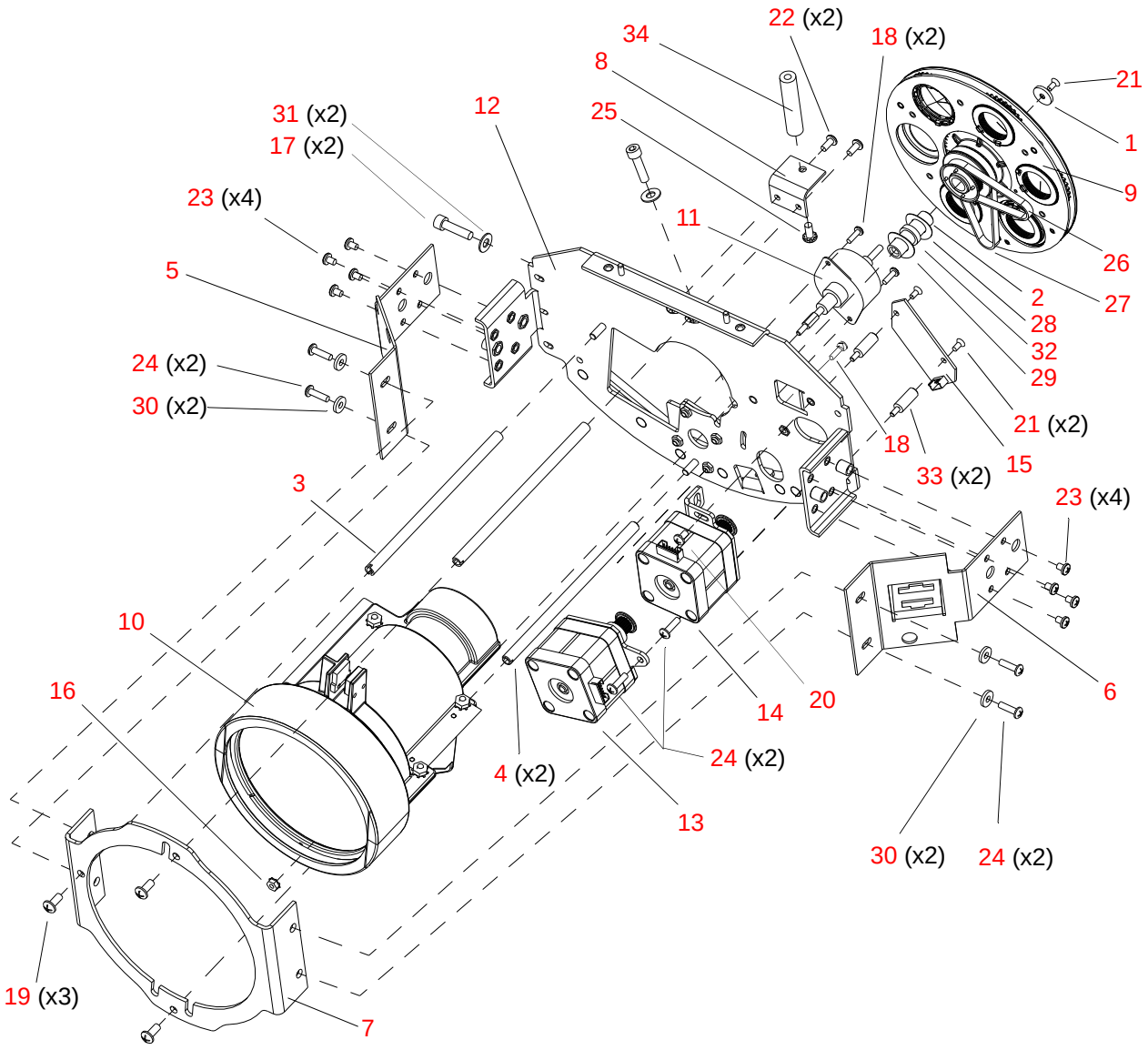


Figure 3-4: Front Assembly

Lens Barrel Assembly

21.9676.4306 Rev D

Refer to Figure 3-5.

No.	Item	Qty.	UM.	Description
1	10.9676.4254	1	EA	SHAFT, ZOOM BEARING
2	10.9676.4256	1	EA	WEAR STRIP, EDGE LENSES
3	10.9676.4258	1	EA	WEAR STRIP, EDGE BARREL
4	10.9676.4259	1	EA	WEAR STRIP, ZOOM BALL PLUNGER
5	10.9676.4260	1	EA	WEAR STRIP BUMPER, EDGE LENSES
6	12.9676.4248	1	EA	EDGE BARREL, BOTTOM
7	12.9676.4247	1	EA	EDGE BARREL, TOP
8	21.9660.0225	1	EA	ASSY, SUB-BARREL GROUP 1
9	21.9660.0227	1	EA	ASSY, GROUP 3 SUB BARREL
10	21.9667.0311	1	EA	ASSY, MOTOR, ZOOM OPTICS
11	21.9676.4257	1	EA	ASSY, EDGE BUSHING
12	21.9676.4229	1	EA	ASSY, ZOOM BARREL
13	42.9660.0026	1	EA	LENS 9, ZOOM OPTICS
14	53.2200.0004	3	EA	NUT, 4-40 KEPS SS
15	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
16	53.6551.0001	2	EA	SCREW, 4-40 X 3/8" PPB
17	53.6558.0015	4	EA	SCREW, 6-32 X 3/8" PPB
18	53.6559.0002	2	EA	SCREW, 4-40 X 1/4" PFB
19	53.6592.0250	2	EA	SCREW, 4-40 X 1/4" PFB, SEMS
20	54.1206.0055	1	EA	RETAINING RING, EXTERNAL 1/2" SHAFT, PRESS ON
21	54.1206.0056	1	EA	RETAINING RING, EXTERNAL 1/2" SHAFT
22	55.3301.0004	2	EA	WASHER, #4 FLAT SS
23	55.6512.0001	2	EA	WASHER, 1/4" SPLIT LOCK

Lens Barrel Assembly (continued)

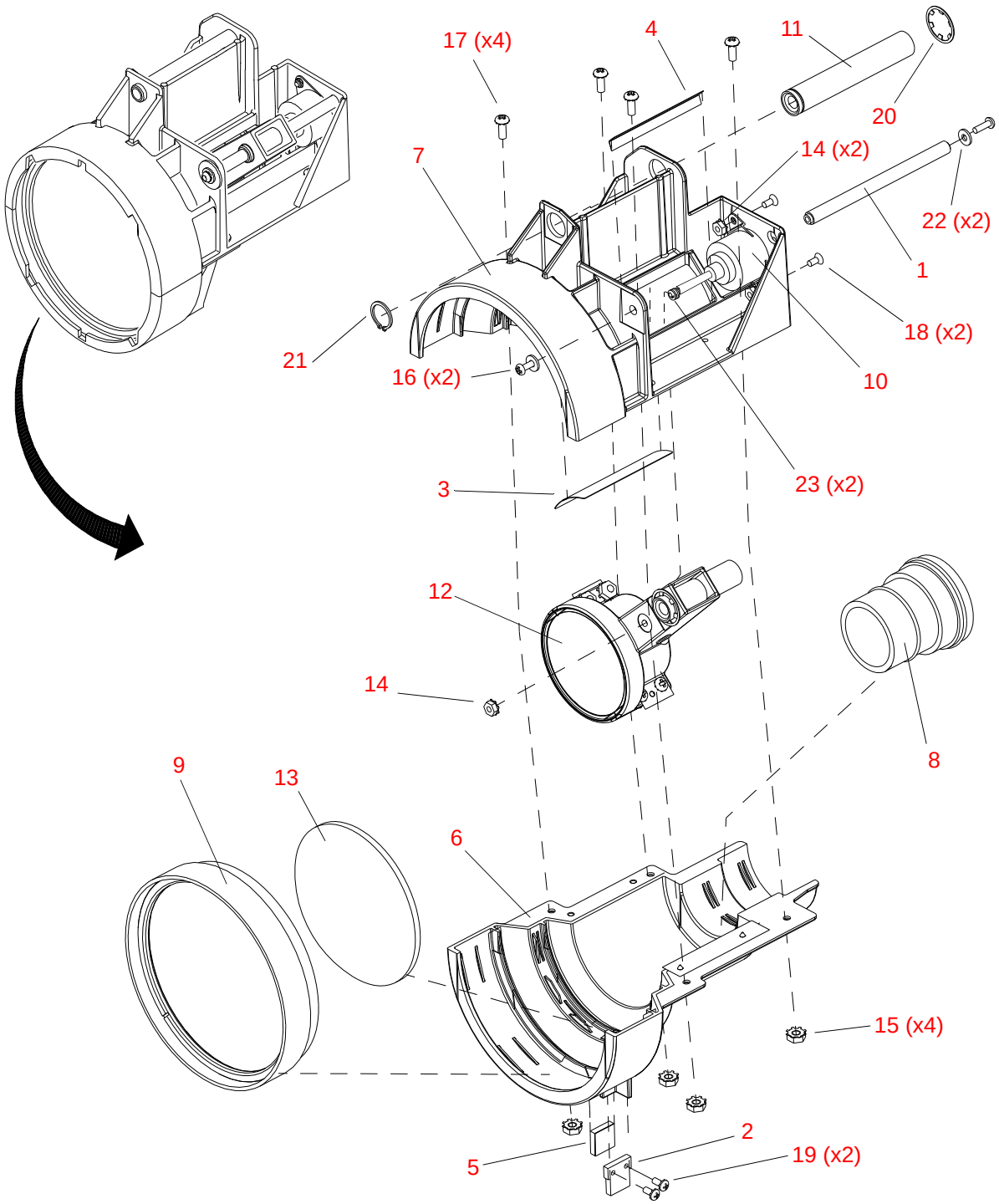


Figure 3-5: Lens Barrel Assembly

Sub-Barrel Group 2 Assembly

21.9676.4229 Rev B

Refer to Figure 3-6.

No.	Item	Qty.	UM.	Description
1	10.9676.4223	1	EA	BARREL, ZOOM, LOWER
2	10.9676.4250	1	EA	SPACER 1, ZOOM LENSES
3	10.9676.4251	1	EA	SPACER 2, ZOOM LENSES
4	12.9676.4224	1	EA	BARREL, ZOOM, UPPER
5	21.9676.4258	1	EA	ASSY, ZOOM BUSHING
6	42.9660.0023	1	EA	LENS 6, ZOOM OPTICS
7	42.9660.0024	1	EA	LENS 7, ZOOM OPTICS
8	42.9660.0025	1	EA	LENS 8, ZOOM OPTICS
9	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
10	53.6543.0001	4	EA	SCREW, 6-32 X 3/8" PPB
11	54.1206.0055	1	EA	RETAINING RING, EXTERNAL, 1/2" PRESS ON
12	54.1206.0056	1	EA	RETAINING RING, EXTERNAL, 1/2"
13	55.6568.0091	1	EA	SPRING PLUNGER, BALL NOSE, PUSH FIT, 1/4" DIA

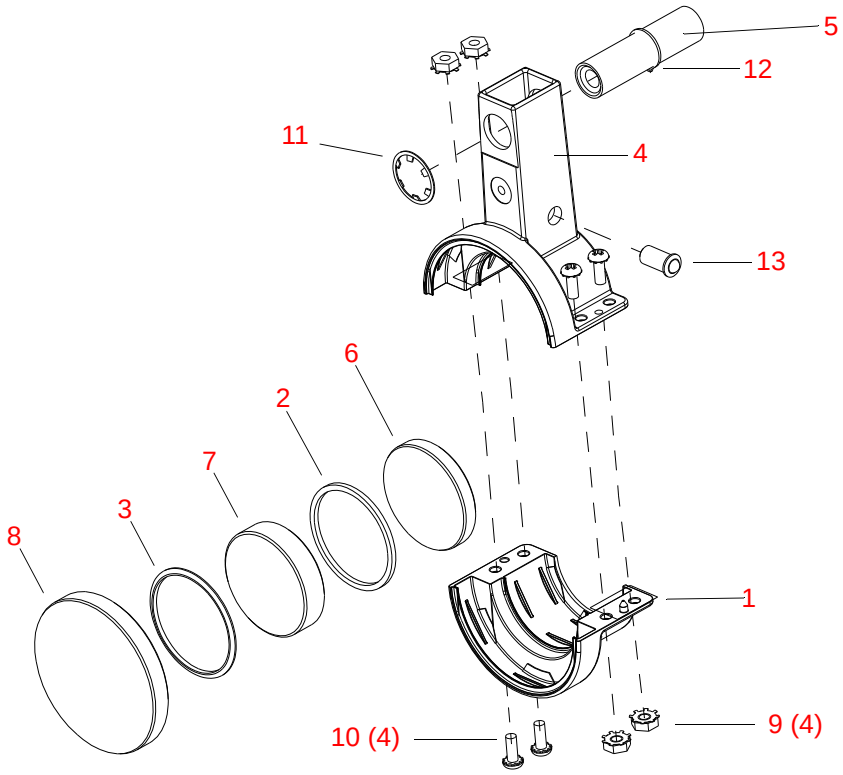


Figure 3-6: Sub-Barrel Group 2 Assembly

Motor Zoom Optics Assembly

21.9667.0311 Rev A

Refer to Figure 3-7.

No.	Item	Qty.	UM.	Description
1	44.9660.0262	1	EA	MOTOR, 1" LINEAR - ZOOM
2	52.6579.0005	1	EA	CONN, 5CIR PNL MT SGL ROW W/MTG EARS
3	52.8347.0001	4	EA	CONTACT, 24-30AWG MALE CRIMP

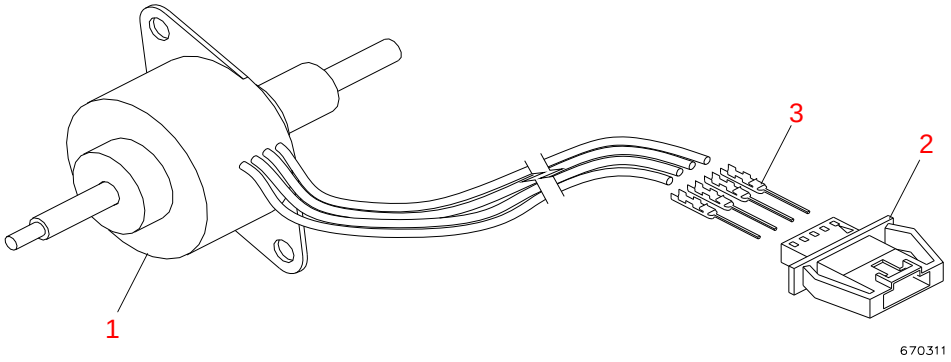


Figure 3-7: Motor Zoom Optics Assembly

Rotating Gobo Wheel Assembly

21.9660.0105 Rev E

Refer to Figure 3-8.

No.	Item	Qty.	UM.	Description
1	10.9660.0110	4	EA	GOBO CARRIER, SPINNING GOBO WHEEL
2	10.9660.0112	1	EA	SUN GEAR, SPINNING GOBO WHEEL
3	10.9660.0144	1	EA	SPRING GOBO RETAINER, SPINNING GOBO WHEEL
4	10.9660.0153	1	EA	MAGNET, HALL EFFECT SENSOR .07ID
5	10.9667.0333	1	EA	MOUNTING PLATE, FRONT (ROTATING GOBO WHEEL)
6	10.9667.0334	1	EA	MOUNTING PLATE, AFT (ROTATING GOBO WHEEL)
7	10.9667.0335	1	EA	LIGHT SHIELD, SPINNING GOBO WHEEL
8	21.9660.0102	1	EA	ASSY, SENSOR PLANET GEAR
9	21.9660.0147	1	EA	ASSY., DRIVE HUB/PULLEY FLANGE, SPINNING GOBO WHEEL
-	10.9660.0111	1	EA	DRIVE HUB, SPINNING GOBO WHEEL - VL6B
-	10.9660.0148	1	EA	PULLEY FLANGE, DRIVE HUB SPINNING GOBO WHEEL
10	41.6016.4305	1	EA	ASSY, GOBO PINWHEEL
11	41.6016.4316	1	EA	ASSY, VL6B SPINNING GOBO HYPNOSPIRAL
12	41.6016.6011	1	EA	ASSY, VL6B SPINNING GOBO CIRCLE OF OVALS
13	41.6016.6990	1	EA	ASSY, VL6B SPINNING GOBO SPIRAL STONES
14	41.6016.8004	1	EA	4 FACET PRISM
15	53.6597.0001	9	EA	SCREW, 4-40 X 3/16" PPZ
16	53.6633.0002	2	EA	SCREW, #4 X 3/8" PFZ SHT METAL

Rotating Gobo Wheel Assembly (continued)

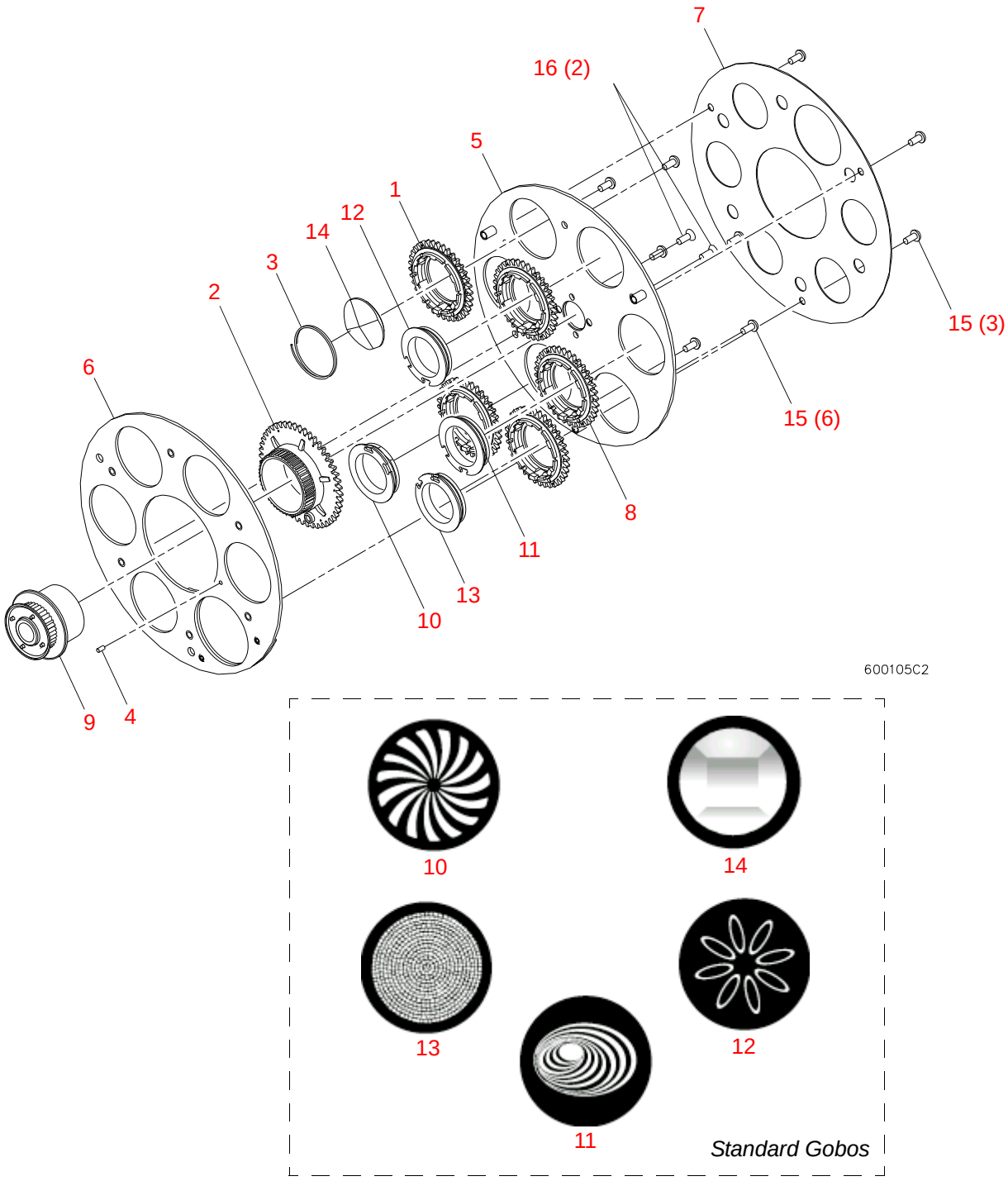


Figure 3-8: Rotating Gobo Wheel Assembly

Sensor Rotating Gobo PCB Assembly

24.9667.1321 Rev -

Refer to Figure 3-9.

Replace as a complete assembly.

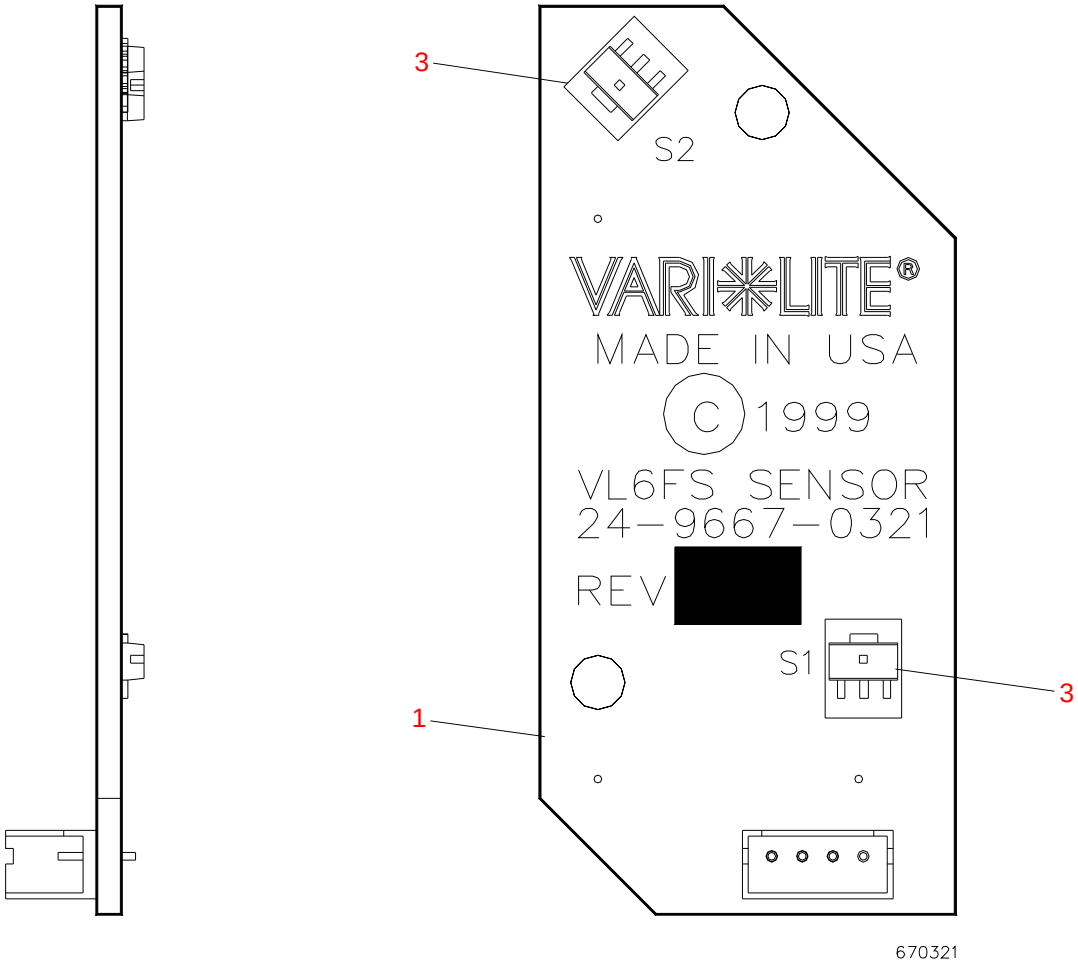


Figure 3-9: Sensor Rotating Gobo PCB Assembly

Top Cover Assembly

22.9676.0008 Rev H

Refer to Figure 3-10.

No.	Item	Qty.	UM.	Description
1	06.6018.0011	0.041	FT	VELCRO, DOUBLE HOOK, 2" BLACK ADH BACKED
2	07.5049.0001	1	EA	LANYARD, NYLON COATED, 8" LONG
3	10.9676.8009	1	EA	COVER, TOP VL2500
4	10.9676.0010	1	EA	FILTER, TOP HEAD COVER
5	12.9676.0076	1	EA	BAFFLE, RIGHT, TOP COVER
6	12.9676.0077	1	EA	BAFFLE, LEFT, TOP COVER
7	53.2008.0008	2	EA	PUSH NUT, #8
8	53.5655.0250	1	EA	SCREW, 6 X 1/4" PPZ PLASTIC
9	53.6545.0001	2	EA	SCREW, 8-32 X 3/8" PPB
10	53.6687.0250	4	EA	SCREW, 4-40 X 1/4" PFZ THREAD FORMING
11	55.3301.0006	1	EA	WASHER, #6 FLAT, SS
12	55.6599.0001	2	EA	WASHER, FLAT, #10 FLAT BLACK
13	55.6621.0001	1	EA	WASHER, #4 FLAT ZINC

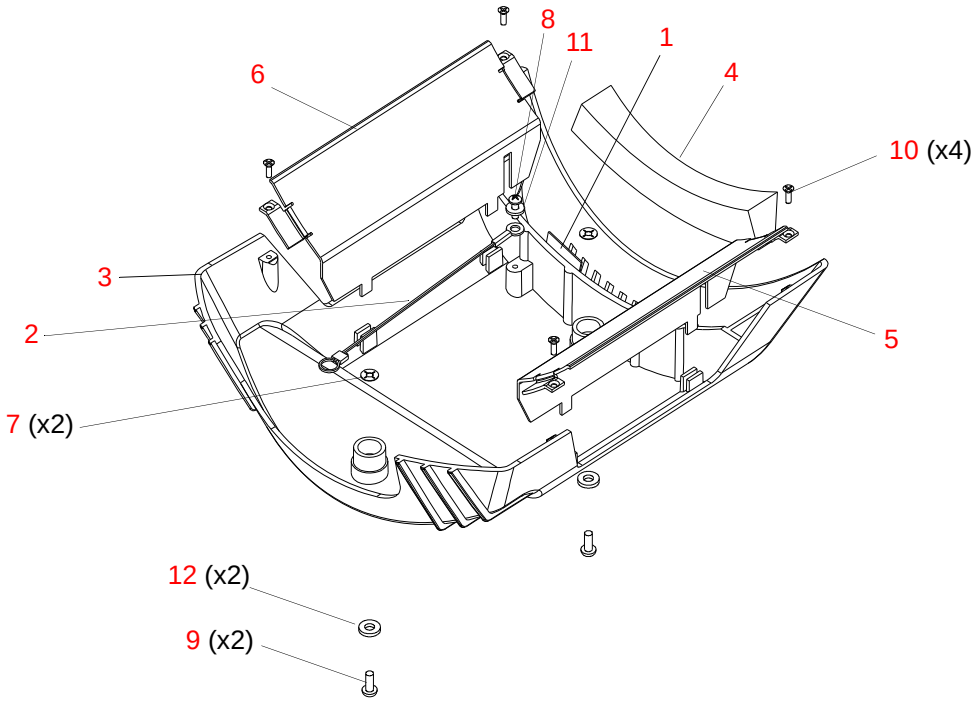


Figure 3-10: Top Cover Assembly

Bottom Cover Assembly

22.9676.0011 Rev D

Refer to Figure 3-11.

No.	Item	Qty.	UM.	Description
1	10.9676.8012	1	EA	COVER, LOWER
2	53.2008.0008	3	EA	NUT, #8 PUSH
3	53.6545.0001	3	EA	SCREW, 8-32 X 3/8" PPB
4	53.6599.0001	3	EA	WASHER, #10 FLAT BLACK

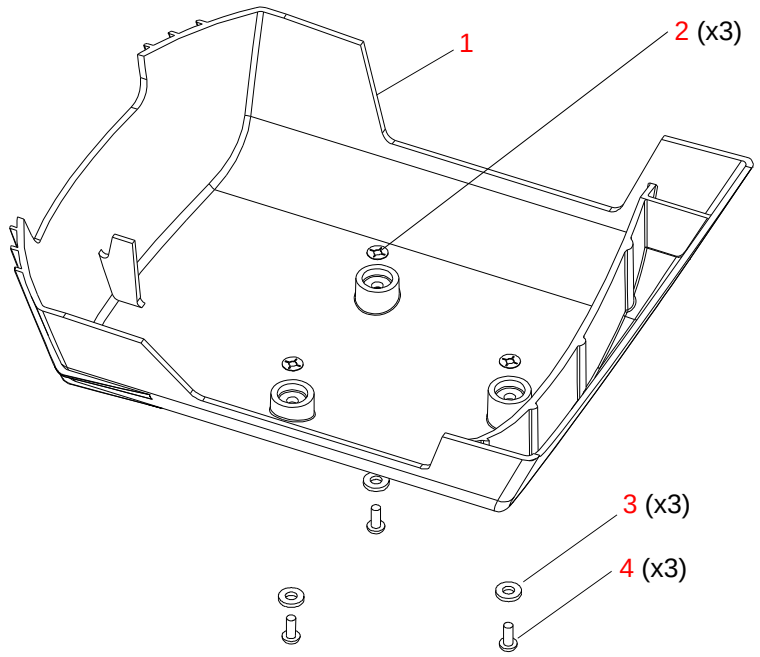


Figure 3-11: Bottom Cover Assembly

Reflector Assembly

22.9676.0018 Rev B

Refer to Figure 3-12.

No.	Item	Qty.	UM.	Description
1	10.9678.0647	4	EA	CLAMP, MOUNTING, REFLECTOR
2	22.9660.0338	1	EA	ASSY, DISCONNECT LAMP
3	22.9676.0130	1	EA	ASSY, REFLECTOR MOUNT
4	41.9660.7021	1	EA	ELLIPSOIDAL REFLECTOR, LUNED
5	53.6599.0001	2	EA	SCREW, 4-40 X 3/8" PFZ
6	55.6669.0016	4	EA	STANDOFF, 1/4" HEX, 6-32 M/F, SS, L = 0.875"

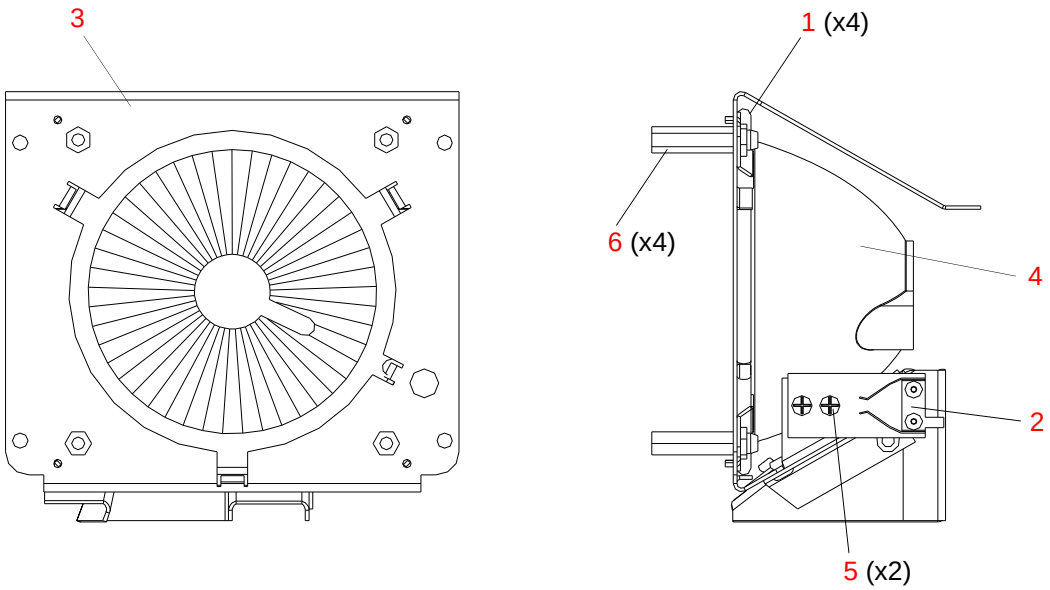


Figure 3-12: Reflector Assembly

Back Cap Assembly

22.9676.0115 Rev E

Refer to Figure 3-13.

No.	Item	Qty.	UM.	Description
1	10.9638.0117	3	EA	KNOB, KNURLED, VL6 BACK CAP/LAMP ASSY.
2	10.9638.0128	1	EA	BRACKET, IGNITOR CABLE
3	10.9638.0130	1	EA	SPRING, BULB WIRE SHEATH
4	10.9638.0164	1	EA	WASHER, FELT
5	10.9667.0411	1	EA	LAMP CARRIAGE
6	10.9667.0412	1	EA	LAMP TILT PLATE
7	12.9676.8112	1	EA	BACKCAP, MACHINED, VL2500
8	22.9638.0129	1	EA	TETHER, VL6 BACKCAP
9	25.9667.0413	1	EA	CABLE ASSY, GROUND -TILT PLATE
10	52.8231.0005	2	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
11	53.2200.0010	1	EA	NUT, 10-32 KEPS SS
12	53.2201.0010	2	EA	NUT, 10-32 HEX SS
13	53.5638.1250	1	EA	SCREW, 1/4-28 X 1 1/4" CAPTIVE
14	53.6519.0001	2	EA	SCREW, 4-40 X 5/8" PPZ VL-1
15	53.6525.0001	1	EA	SCREW, 6-32 X 5/16" PPZ
16	53.6526.0001	2	EA	SCREW, 6-32 X 5/8" PPZ
17	53.6534.0001	4	EA	RIVET, 3/32" OD POP 3/32" GRIP RNG ALUM
18	53.6539.0011	1	EA	SCREW, 10-32 X 2 1/4" PFBSS UNF-2A
19	53.6539.0012	2	EA	SCREW, 10-32 X 2" PFBSS UNF-2A
20	53.6546.0002	2	EA	SCREW, 8-32 X 5/16" PPZ
21	53.6515.0001	1	EA	SCREW, 10-32 X 3/4" SCB CAP
22	10.9676.0071	1	EA	SWIVEL PLATE, LAMP ADJUST
23	55.2134.0003	2	EA	PLATE, FLOATING NUT 10-32
24	55.2260.0208	1.92	FT	SLEEVING, .208ID SILICONE RUBBER COATED FIBERGLASS
25	55.3301.0006	3	EA	WASHER, #6 FLAT SS
26	55.3303.0004	2	EA	WASHER, #4 LOCK INT.TOOTH SS
27	55.6540.0001	2	EA	WASHER, #10 FLAT BRASS
28	55.6568.0017	1	EA	SPRING, CPRSN .480" OD 1.500" LG SS
29	55.6568.0036	2	EA	SPRING, CPRSN .360" OD .690" LG .032" WIRE DIA SS
30	55.6568.0048	2	EA	SPRING, CPRSN .480" OD 1.000" LG SS
31	71.2502.0003	1	EA	SOCKET, FASSUNG GY9.5 W/ 905 MM LEADS
32	53.6682.0034	1	EA	SCREW, 10-32 X 1/2" PPB SEMS

Back Cap Assembly (continued)

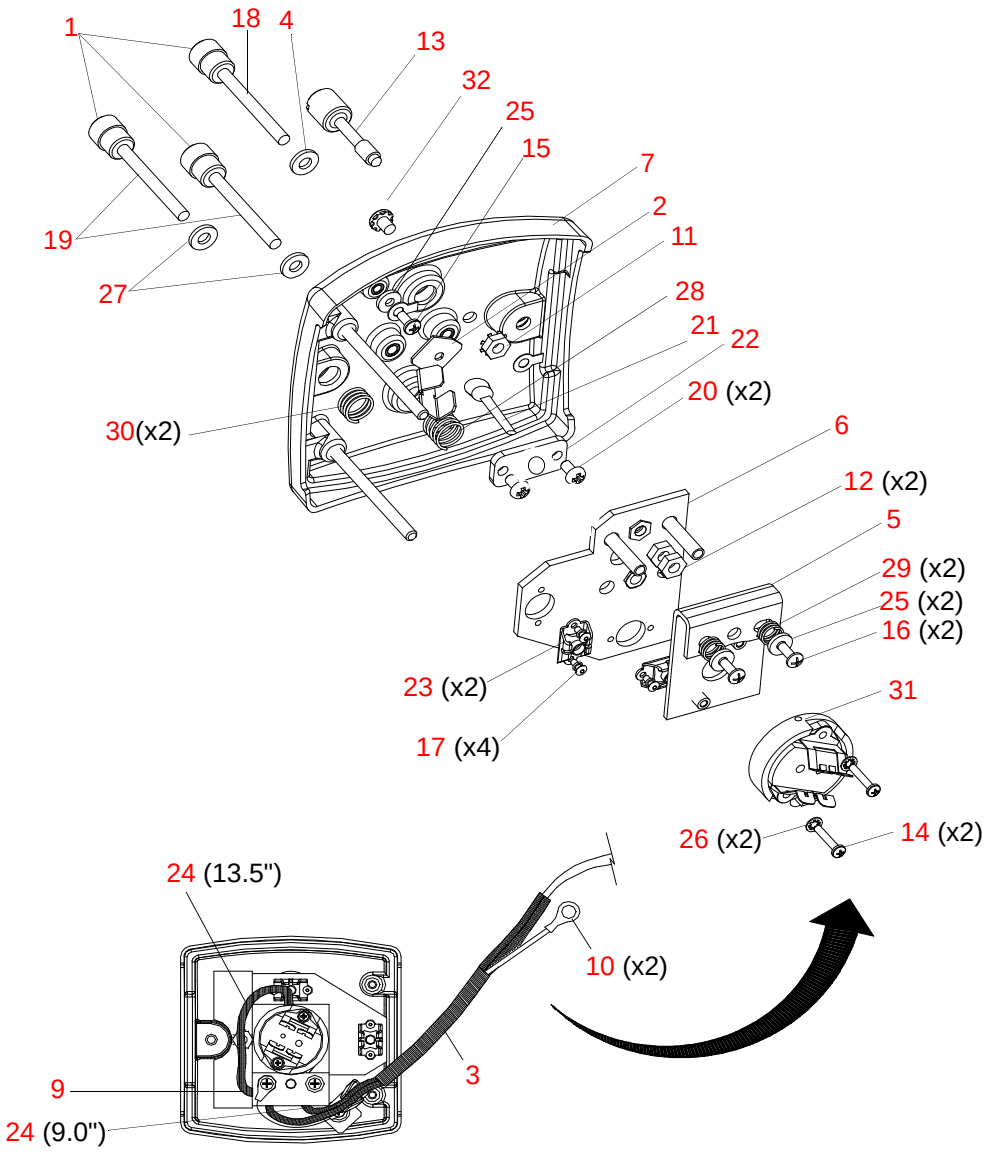


Figure 3-13: Back Cap Assembly

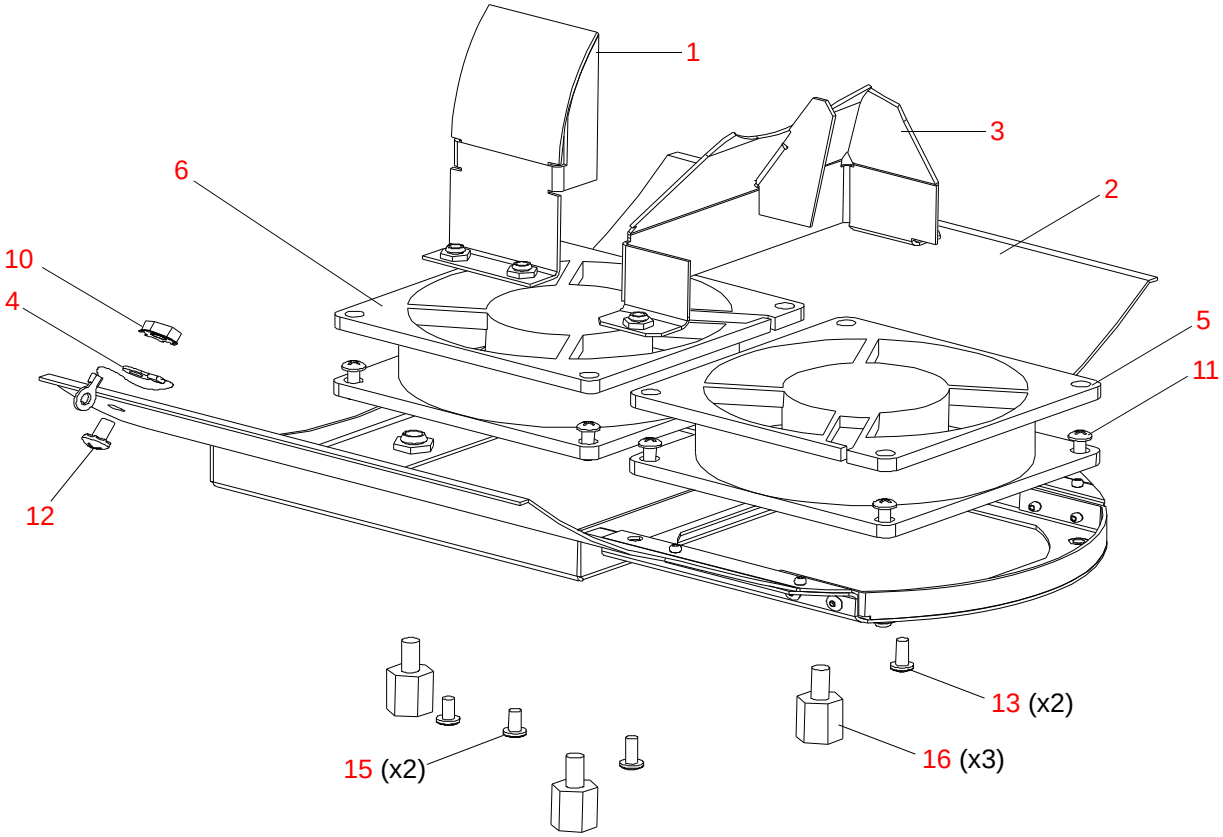
Fan Assembly

22.9676.0090 Rev D

Refer to Figure 3-14.

No.	Item	Qty.	UM.	Description
1	10.9676.0068	1	EA	AIR DUCT, FRONT FAN
2	22.9676.0091	1	EA	ASSY, FAN BULKHEAD
3	22.9676.0095	1	EA	AIR DUCT, REAR FAN
4	25.8007.2212	1	EA	CABLE ASSY, GROUND STRAP, #6 RING 3" LG
5	40.7113.0002	1	EA	FAN, +24 VOLT, 80 X 80 X 25MM, 39CFM
6	40.7146.0002	1	EA	DC FAN, 3.15" SQ X 1.0" BB LOW FLOW
7	52.6523.0005	1	EA	CONN, HOUSING, 5 POS. PLUG SHROUD
8	52.8347.0001	5	EA	CONTACT, 24-30 AWG, CRIMP MALE
9	52.8371.0001	1	EA	RECEPT., FASTON, 20-24 AWG, UNINSULATED
10	53.2200.0006	1	EA	NUT, KEPS #6-32 SS
11	53.5604.0375	8	EA	SCREW, 4-40 X 3/8", PPSS-B
12	53.6558.0010	1	EA	SCREW, 6-32 X 1/4" LG PPZ BLK
13	53.6596.0001	2	EA	SCREW, 4-40 X 5/16" PPZ
14	55.2186.0001	1	EA	CABLE TIE, .10" X 4" SMALL
15	55.2203.0001	2	EA	SCREW, 4-40 X 1/4" PPZ
16	55.6616.0008	3	EA	STANDOFF, 3/8" HEX 8-32 THRD 0.5" LG
17	73.1624.0008	1	FT	WIRE, 24 AWG 300V 200 DEG C TEFLON GRY

Fan Assembly (continued)



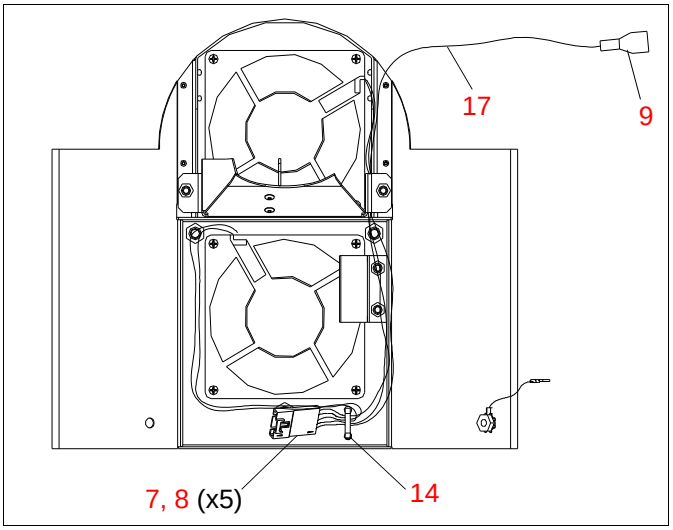


Figure 3-14: Fan Assembly

Iris/Color/Gobo Bulkhead Assembly

21.9676.4120 Rev C

Refer to Figure 3-15.

No.	Item	Qty.	UM.	Description
1	10.9676.4124	1	EA	BULKHEAD, IRIS/GOBO/COLOR
2	21.9676.0118	1	EA	ASSY, IRIS/GOBO MOTOR
3	21.9676.0119	1	EA	ASSY, COLOR MOTOR
4	22.9676.4146	1	EA	ASSY, GOBO WHEEL
5	22.9676.4145	1	EA	ASSY, COLOR FILTER WHEEL
6	22.9676.1145	1	EA	IRIS, 53MM OD, CUSTOM
7	25.9676.0125	1	EA	CABLE ASSY, T-STAT, COLOR/GOBO
8	53.2200.0004	1	EA	NUT, 4-40 KEPS SS
9	53.6558.0007	6	EA	SCREW, 4-40 X 1/4" PPZ SEMS
10	53.6559.0001	1	EA	SCREW, 4-40 X 1/4" PFZ
11	53.6605.0004	1	EA	STUD, 2-56 X 1.0 FULL THD SST
12	53.6659.0014	3	EA	SCREW, 2-56
13	54.1217.0005	2	EA	QUICK LINK, 2-56, SPRING STEEL
14	55.6538.0005	7	EA	WASHER, 0.25" OD, 0.65" ID, 0.15" THK TEFLON
15	55.6543.0001	1	EA	GROMMET STRIP, SERRATED .062" (NOT SHOWN)

Iris/Color/Gobo Bulkhead Assembly (continued)

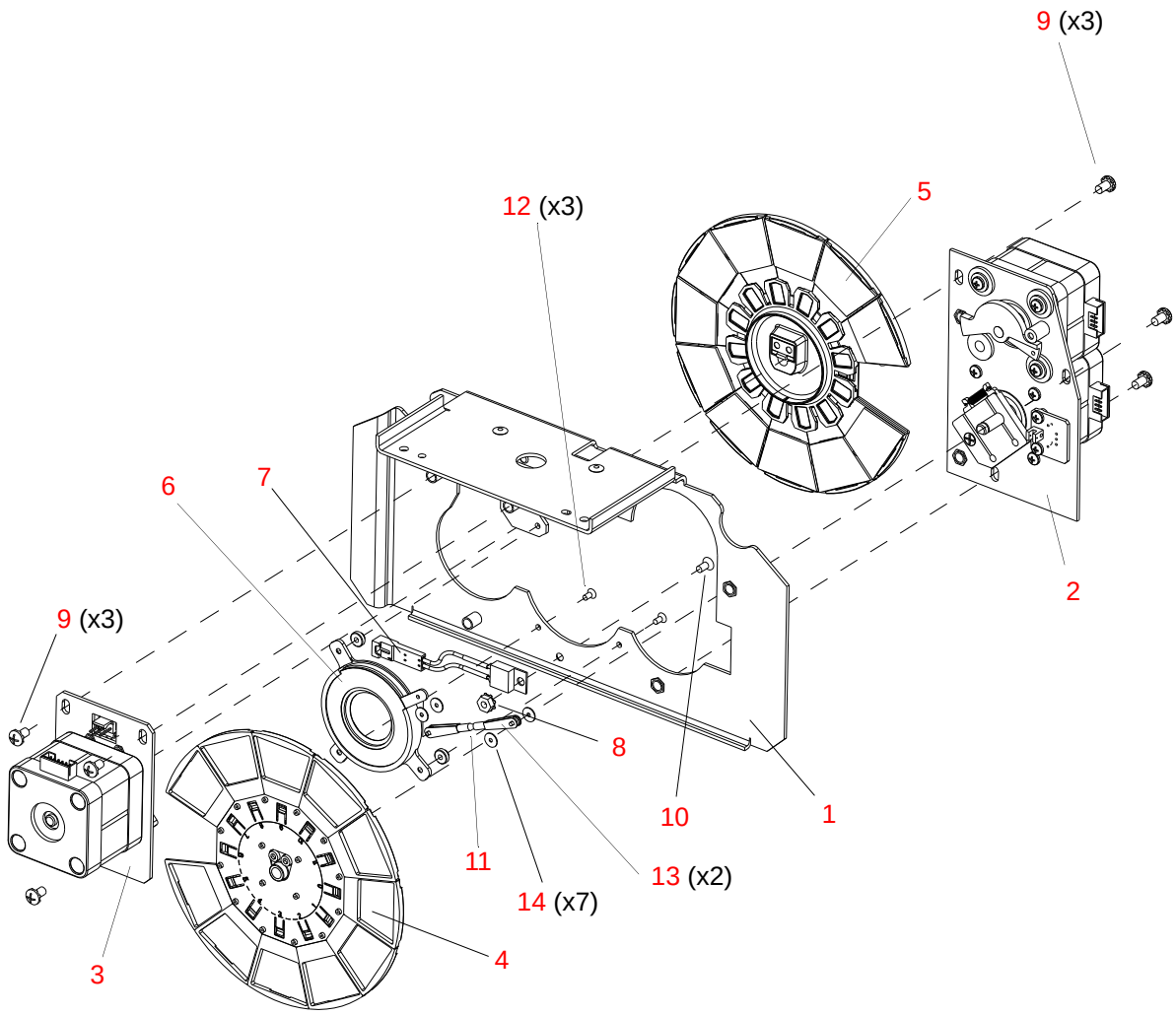


Figure 3-15: Iris/Color/Gobo Bulkhead Assembly

Crossfade Color Assembly

21.9676.0201 Rev N

Refer to Figure 3-16.

No.	Item	Qty.	UM.	Description
1	10.9676.0230.01	4	EA	SPACER, COLOR WHEEL
2	10.9676.0230.02	1	EA	SPACER, COLOR MOTOR
3	10.9676.0234	1	EA	AFT BULKHEAD, CROSSFADE COLOR SYSTEM
4	10.9676.0238	1	EA	BULKHEAD SPACER 2, COLOR SYSTEM
5	10.9676.0235	5	EA	SPACER, BULKHEAD, COLOR SYSTEM
6	10.9676.0284	1	EA	SHAFT, COLOR SYSTEM
7	10.9678.0485	4	EA	PULLEY, COLOR MOTOR
8	21.9676.0289	1	EA	ASSY, FRONT BULKHEAD/DIFFUSER
9	21.9676.0290	1	EA	ASSY, MAGENTA COLOR WHEEL
10	21.9676.0291	1	EA	ASSY, CYAN COLOR WHEEL
11	21.9676.0292	1	EA	ASSY, YELLOW COLOR WHEEL
12	21.9676.0293	1	EA	ASSY, DIMMER WHEEL
13	21.9676.0298	1	EA	ASSY, SENSOR PCB/BRACKET
14	44.9676.0236	4	EA	MOTOR, COLOR
15	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
16	53.2200.0008	1	EA	NUT, 8-32 KEPS SS
17	53.5559.0250	4	EA	SCREW, 6-32 X 1/4" SET CONE POINT
18	53.6520.0188	2	EA	SCREW, 4-40 X 3/16" PFZ UNDERCUT
19	53.6525.0001	4	EA	SCREW, 6-32 X 5/16" PPZ
20	53.6545.0001	5	EA	SCREW, 8-32 X 3/8" PPB
21	53.6545.0007	1	EA	SCREW, 8-32 X 3/8" PFB
22	53.6596.0001	4	EA	SCREW, 4-40 X 5/16" PPZ
23	54.2049.0135	2	EA	BELT, TIMING MXL 0.08 PITCH 135 GRV
24	54.2059.0001	2	EA	BELT, TIMING MXL 0.08 PITCH 150 GRV
25	55.2110.0002	3	EA	WASHER, .400" OD, .260" ID, .010" THK
26	55.2179.0008	2	EA	SADDLE, LOCKING TOP, 0.067 HOLE
27	55.6503.0001	5	EA	WASHER, #8 LOCK INT. TOOTH
28	55.6818.0002	1	EA	KURLY LOK, STANDOFF, 45 DEG, NYLON 6/6 (NOT SHOWN)
29	55.9676.0255	1	EA	BELLEVILLE SPRING WASHER, SPEC B0500-018-S

Crossfade Color Assembly (continued)

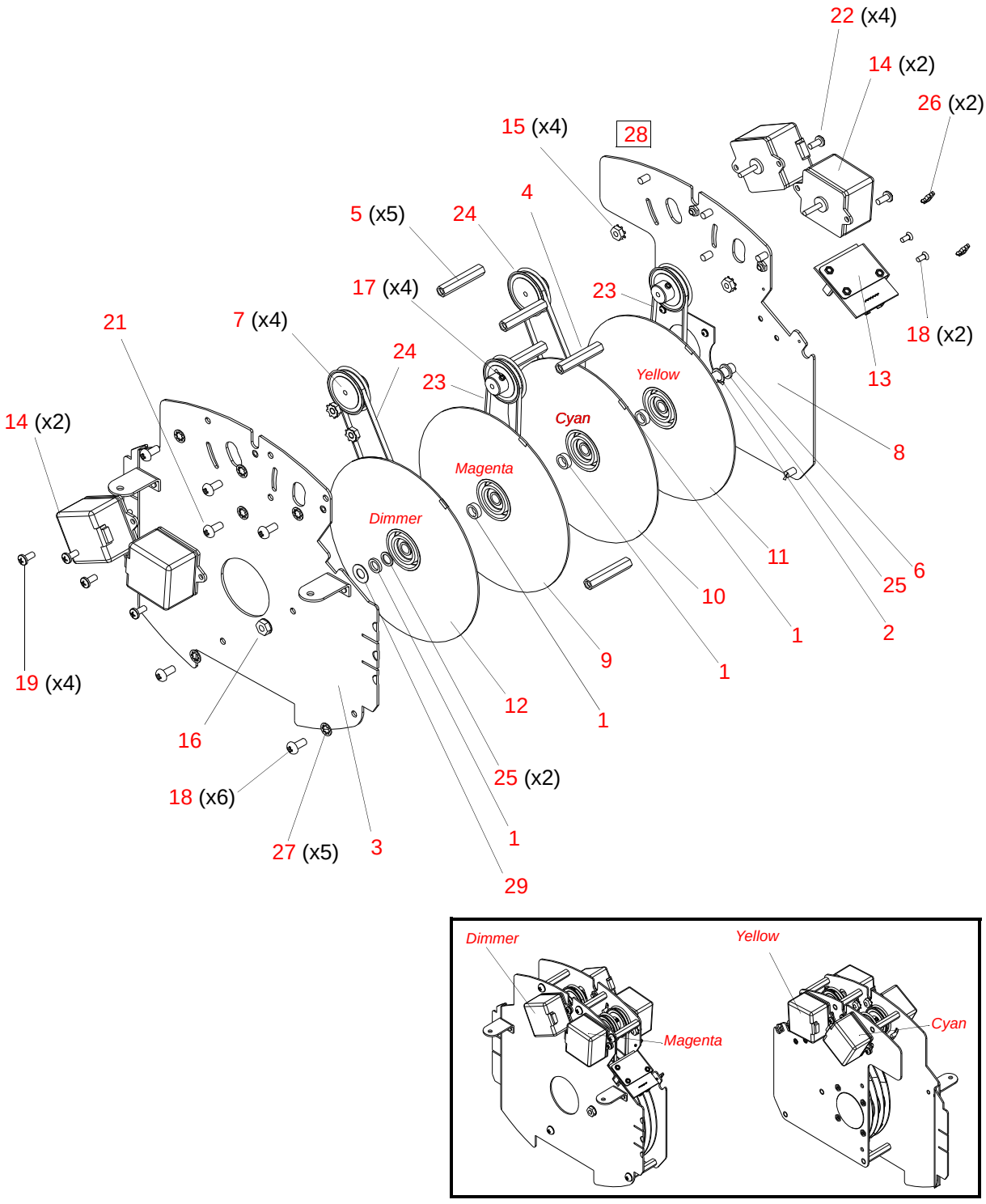


Figure 3-16: Crossfade Color Assembly

Iris/Gobo Motor Assembly

21.9676.0118 Rev D

Refer to Figure 3-17.

No.	Item	Qty.	UM.	Description
1	10.9621.0097	1	EA	STABILIZER, STEPPER, GOBO WHEEL
2	10.9667.1111	1	EA	MOTOR BULKHEAD, IRIS/GOBO
3	10.9667.0126	1	EA	IRIS CRANK
4	24.9676.1114	1	EA	PCB ASSY, SENSOR, VL6B
5	44.9676.0116	1	EA	MOTOR, GOBO/COLOR WHEEL
6	44.9676.0118	1	EA	MOTOR, IRIS
7	53.6578.0001	1	EA	SCREW, 4-40 X 1/8" SET
8	53.6596.0001	3	EA	SCREW, 4-40 X 5/16" PPZ
9	53.6597.0001	2	EA	SCREW, 4-40 X 3/16" PPZ
10	53.6599.0001	1	EA	SCREW, 4-40 X 3/8" PFZ
11	55.2203.0001	3	EA	SCREW, 4-40 X 1/4" PPZ
12	55.3301.0004	1	EA	WASHER, #4 FLAT SS
13	55.6512.0001	2	EA	WASHER, #4 SPLIT LOCK
14	55.6568.0016	1	EA	SPRING, EXTSN .125" OD .500" LG .018" WIRE DIA SS
15	55.6579.0005	4	EA	GROMMET, 3/8" HOLE 3/16" ID
16	55.6589.0002	1	EA	STANDOFF, 1/4" RND 4-40 .328" FF ALUM
17	55.6595.0004	3	EA	SPACER, 3/16OD X .171L X #4HOLE ALUM.
18	55.6621.0001	3	EA	WASHER, #4 FLAT ZINC

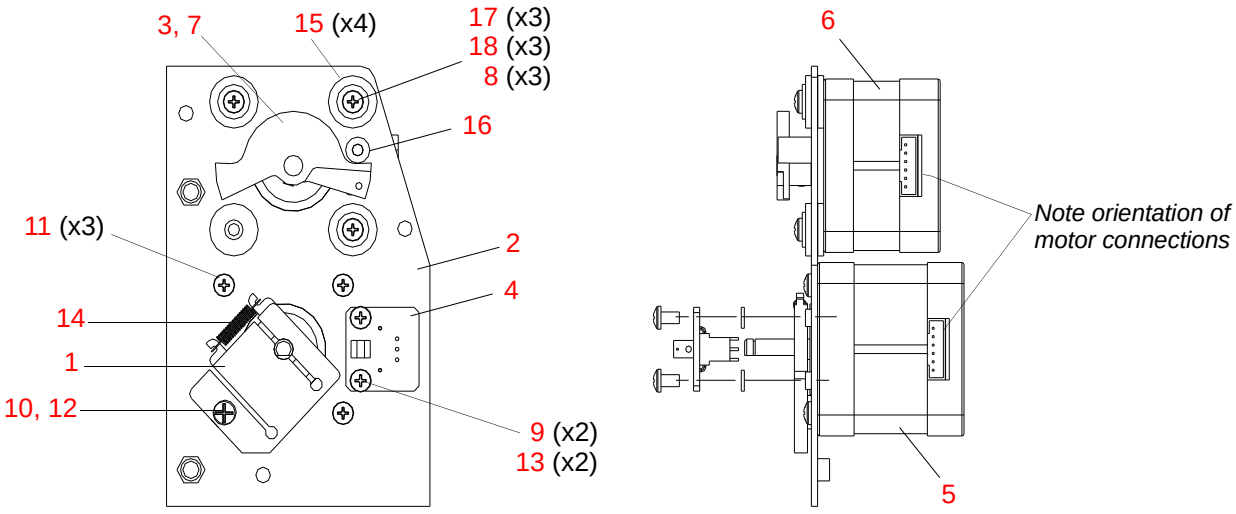


Figure 3-17: Iris/Gobo Motor Assembly

Color Motor Assembly

21.9676.0119 Rev D

Refer to Figure 3-18.

No.	Item	Qty.	UM.	Description
1	10.9621.0097	1	EA	STABILIZER, STEPPER, GOBO WHEEL
2	10.9676.1120	1	EA	COLOR MOTOR BULKHEAD
3	24.9676.1114	1	EA	PCB ASSY, SENSOR, COLOR/GOBO
4	44.9676.0116	1	EA	MOTOR, GOBO/COLOR WHEEL
5	55.2203.0001	2	EA	SCREW, 4-40 X 3/16" PPZ
6	53.6599.0001	1	EA	SCREW, 4-40 X 3/8" PFZ
7	55.2203.0001	3	EA	SCREW, 4-40 X 1/4" PPZ
8	55.3301.0004	3	EA	WASHER, #4 FLAT SS
9	55.6512.0001	2	EA	WASHER, #4 SPLIT LOCK
10	55.6568.0016	1	EA	SPRING, EXTSN .125" OD.500" LG .018" WIRE DIA SS

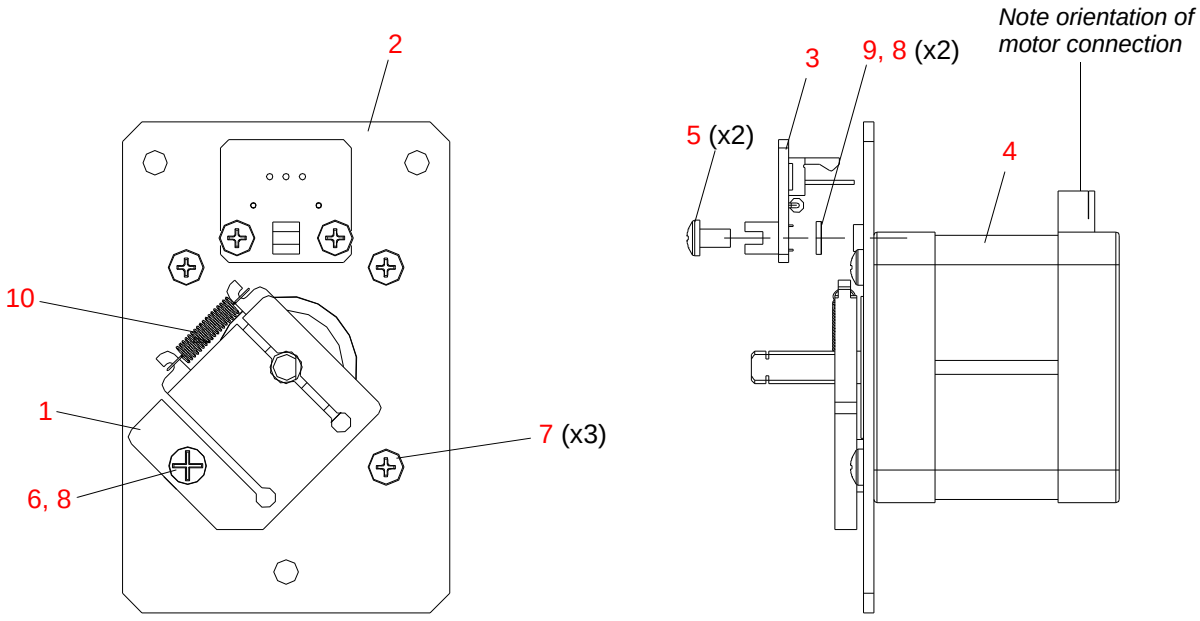


Figure 3-18: Color Motor Assembly

Gobo Wheel Assembly

21.9676.4146 Rev A

Refer to Figure 3-19.

No.	Item	Qty.	UM.	Description
1	22.9676.4142	1	EA	ASSY, GOBO WHEEL, 12 POSITION FIXED
-	12.9676.4140	1	EA	HUB, CAVITY, GOBO WHEEL MACHINED CASTING
-	10.9676.4141	1	EA	SPRING CLIP PLATE
-	10.9676.4143	1	EA	CLAMP, GOBO WHEEL
-	10.9676.4144	1	EA	SPACER CLAMP, GOBO WHEEL
-	53.5704.0250	2	EA	SCREW, 4-40 X 1/4" LG SCSS
2	41.6006.4202	1	EA	ASSY, VL6 GOBO, VERTICAL BARS (ST)
3	41.6006.5009	1	EA	ASSY, VL6 GOBO LIQUID TEXTURE (P.O.)
4	41.6006.5011	1	EA	ASSY, VL6 GOBO, NIGHT SKY (ST)
5	41.6006.5501	1	EA	ASSY, VL6 GOBO, LEAVES (ST)
6	41.6006.5523	1	EA	ASSY, VL6 GOBO, TRIBAL BREAKUP (P.O.)
7	41.6006.6001	1	EA	ASSY, VL6 GOBO, MEDIUM CIRCLE (ST)
8	41.6006.7002	1	EA	ASSY, VL6 GOBO, PEBBLES (ST)
9	41.6006.7008	1	EA	ASSY, VL6 GOBO, WAVE (ST)
10	41.6006.7015	1	EA	ASSY, VL6 GOBO, BLOCK BREAKUP (ST)
11	41.6006.7025	1	EA	ASSY, VL6 GOBO, DUST BREAKUP (CA)
12	41.6006.7029	1	EA	ASSY, VL6 GOBO ALPHA RAYS (P.O.)

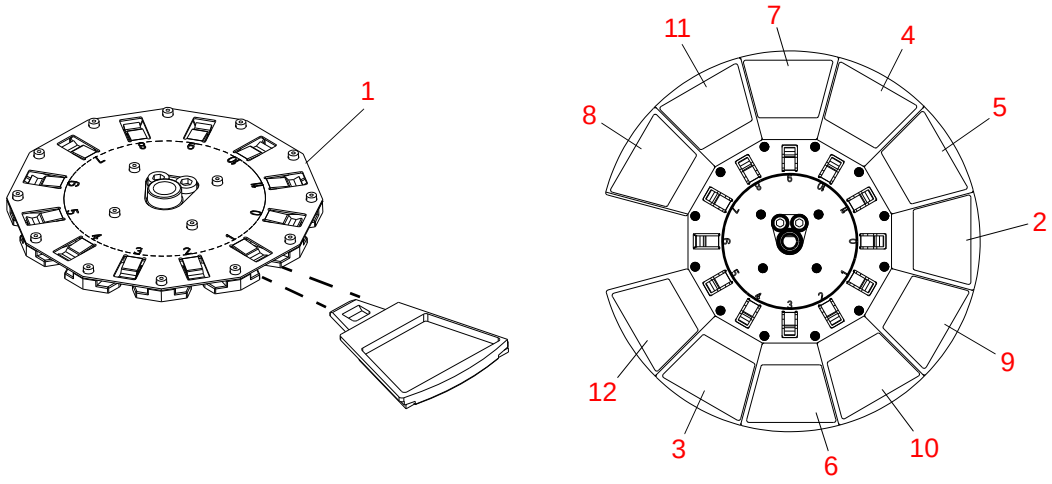


Figure 3-19: Gobo Wheel Assembly

Color Filter Wheel Assembly

21.9676.4145 Rev A

Refer to Figure 3-20.

No.	Item	Qty.	UM.	Description
1	22.9676.4142	1	EA	ASSY, GOBO WHEEL, 12 POSITION FIXED
-	12.9676.4140	1	EA	HUB, CAVITY, GOBO WHEEL MACHINED CASTING
-	10.9676.4141	1	EA	SPRING CLIP PLATE
-	10.9676.4143	1	EA	CLAMP, GOBO WHEEL
-	10.9676.4144	1	EA	SPACER CLAMP, GOBO WHEEL
-	53.5704.0250	2	EA	SCREW, 4-40 X 1/4" LG SCSS
2	41.6006.0020	1	EA	ASSY, VL6 FILTER, MAGENTA (ST)
3	41.6006.0150	1	EA	ASSY, VL6 FILTER, PINK (ST)
4	41.6006.0240	1	EA	ASSY, VL6 FILTER, LIGHT RED (ST)
5	41.6006.0320	1	EA	ASSY, VL6 FILTER, BASTARD AMBER #1 (ST)
6	41.6006.0440	1	EA	ASSY, VL6 FILTER, ORANGE (ST)
7	41.6006.0540	1	EA	ASSY, VL6 FILTER, YELLOW (ST)
8	41.6006.0660	1	EA	ASSY, VL6 FILTER, GREEN (ST)
9	41.6006.0820	1	EA	ASSY, VL6 FILTER, LT.BLUE-GREEN (ST)
10	41.6006.0850	1	EA	ASSY, VL6 FILTER, BLUE (ST)
11	41.6006.0960	1	EA	ASSY, VL6 FILTER, LAVENDER (ST)
12	41.6006.0990	1	EA	ASSY, VL6 FILTER, UV (ST)

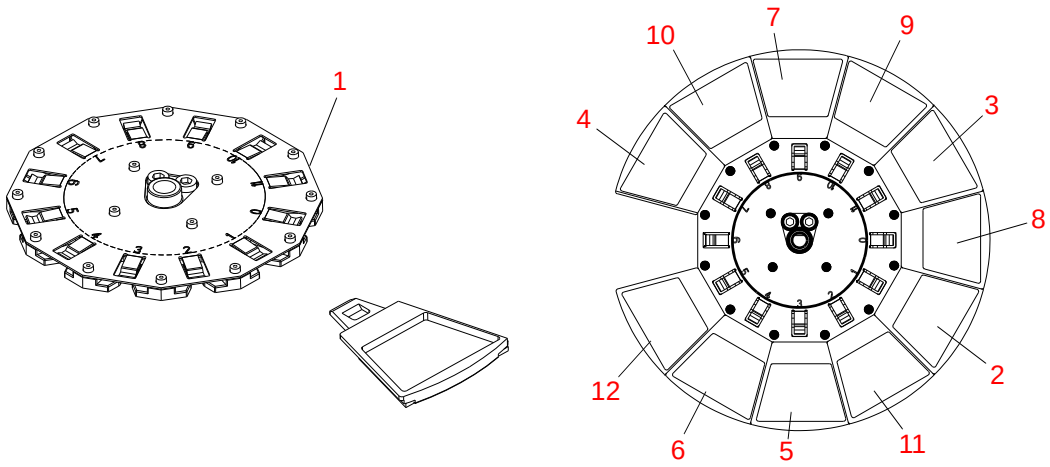


Figure 3-20: Filter Wheel Assembly

Strobe Assembly

22.9676.0016 Rev H

Refer to Figure 3-21.

No.	Item	Qty.	UM.	Description
1	10.9676.0043	1	EA	BULKHEAD, STROBE MOUNTING
2	10.9676.0019	2	EA	STROBE BLADE, DIMPLED
3	10.9676.0060	2	EA	MOUNTING COLLAR, STROBE BLADE
4	10.9676.8061	2	EA	STABLIZER, STROBE MOTOR
5	10.9676.0069	2	EA	MOUNTING PLATE, STROBE MOTOR
6	10.9678.0491	4	EA	BUMPER STOP, STROBE
7	44.9678.0455	2	EA	MOTOR, COLOR
8	53.2200.0006	2	EA	NUT, 6-32 KEPS SS
9	53.5536.0500	4	EA	SCREW, 6-32 X 1/2" PFSS-B
10	53.6525.0001	2	EA	SCREW, 6-32 X 5/16" PPZ
11	53.6528.0001	2	EA	WASHER, #6 FLAT ZINC
12	53.6587.0001	6	EA	SCREW, 4-40 X 1/8" PPZ
13	53.6610.0003	2	EA	SCREW, 6-32 X 7/16" PPZ
14	53.5559.0250	4	EA	SCREW, 6-32 X 1/4" SET CONE POINT
15	53.6682.0002	8	EA	SCREW, 4-40 X 1/4" PPZ SEMS
16	55.6568.0054	2	EA	SPRING, EXTSN 1/2" FL X 1/8" HOOK OPEN

Strobe Assembly (continued)

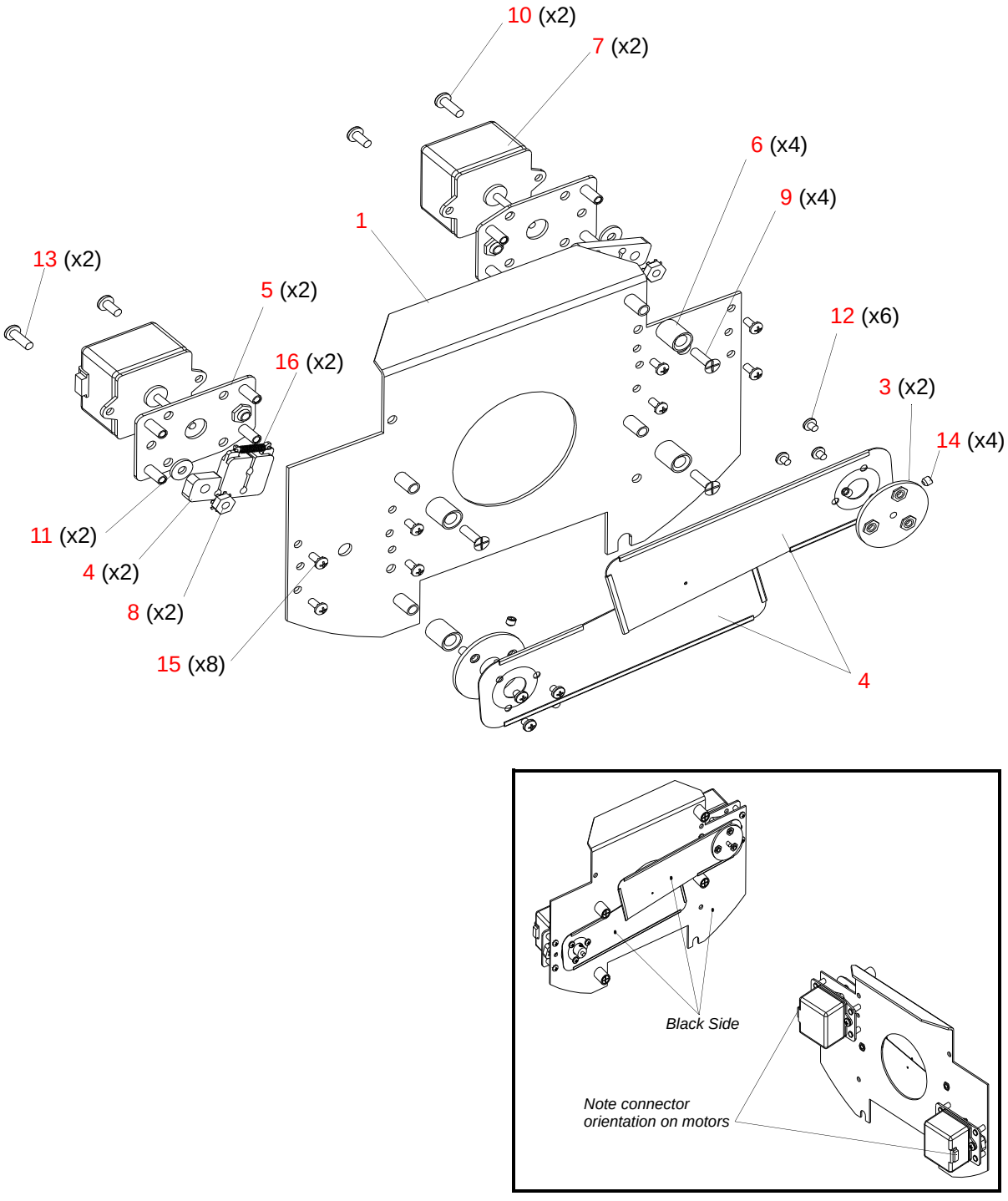


Figure 3-21: Strobe Assembly

UV / IR Window Assembly

22.9676.0140 Rev G

Refer to Figure 3-22.

No.	Item	Qty.	UM.	Description
1	10.9676.0058	1	EA	UV / IR FRAME
2	41.9678.0608	1	EA	UV / IR FILTER, 3.00" X 3.00"
3	53.5504.0187	2	EA	SCREW, 4-40 X 3/16" PPSS
4	55.6569.0001	2	EA	WASHER, #2 LOCK
5	74.1034.0001	1	EA	THERMAL SWITCH, 15 AMP 315 DEG F OPEN
6	10.9676.0141	1	EA	INSULATOR, THERMAL SWITCH (NOT SHOWN)

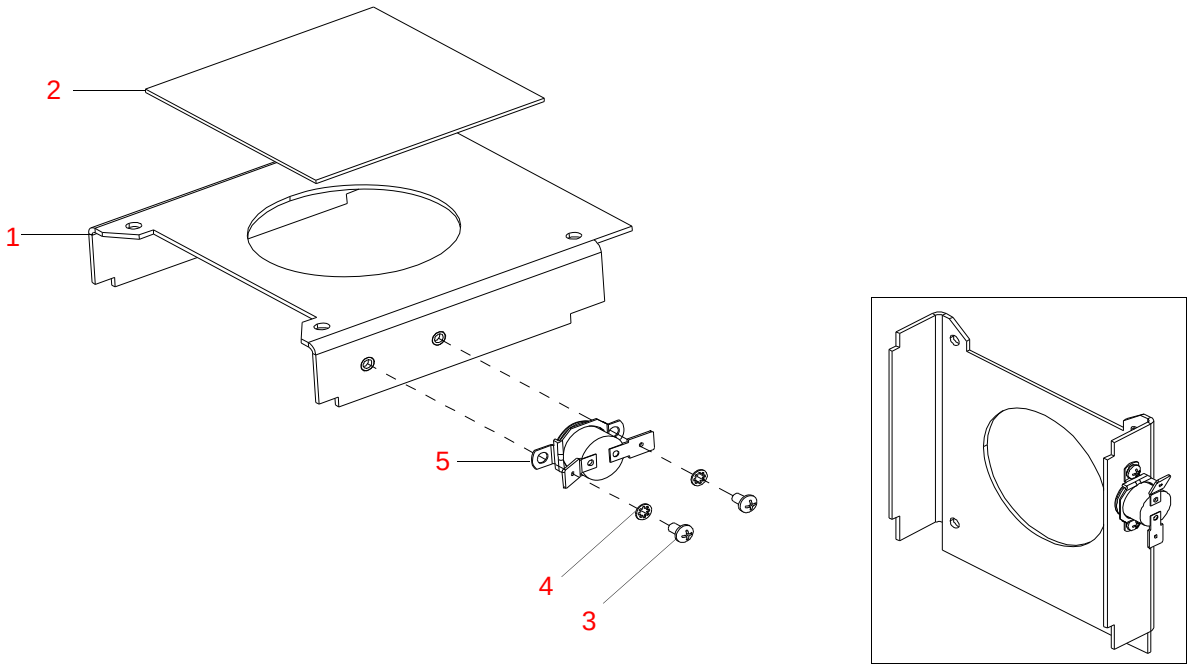


Figure 3-22: UV / IR Window Assembly

VL2500 Main Control Board PCB Assembly

24.9676.3730 Rev 0

Refer to Figure 3-23

Replace as a complete assembly.

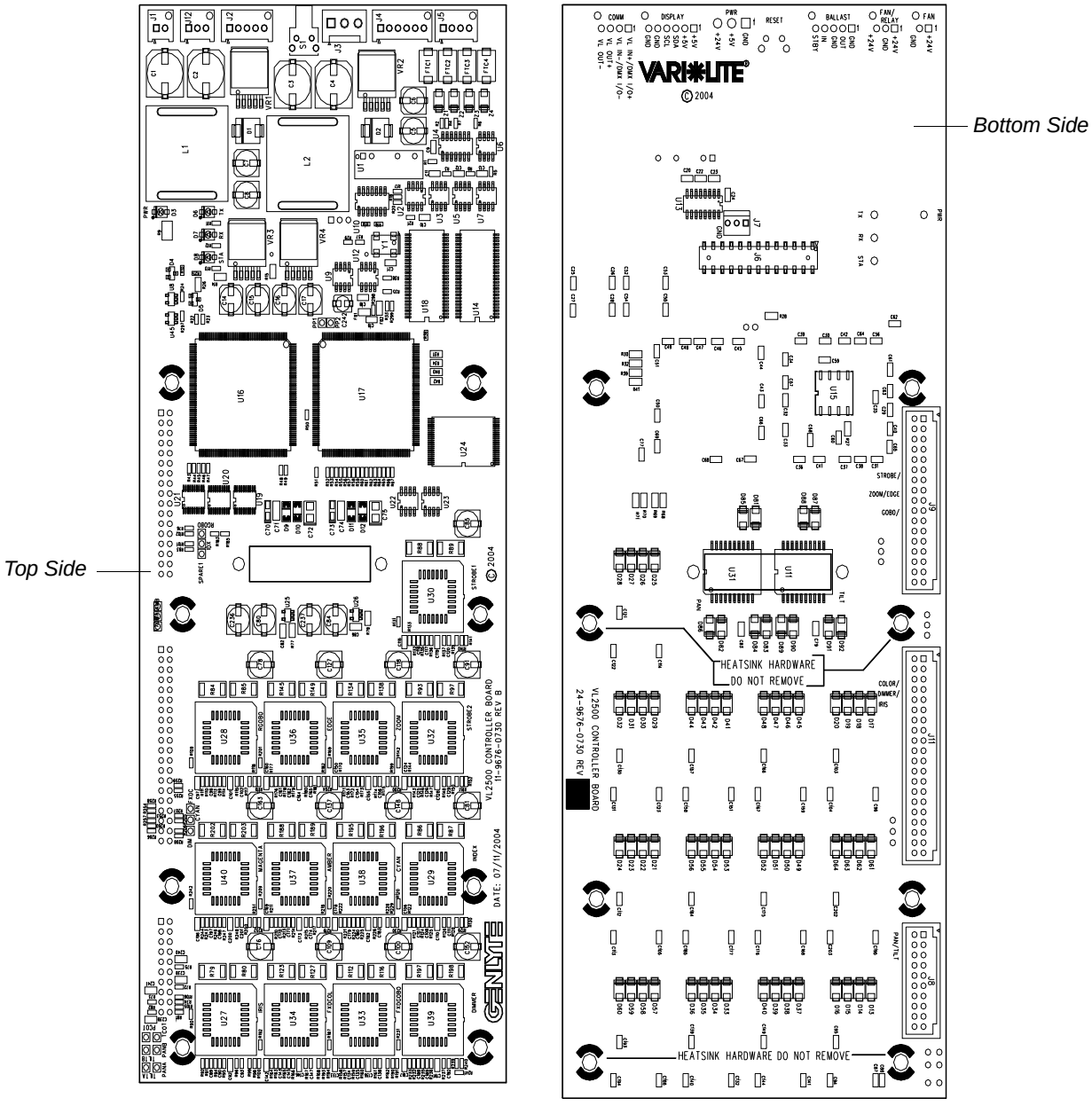


Figure 3-23: VL2500 Main Control Board PCB Assembly

Notes

Yoke

Yoke Assembly

21.9676.0600 Rev G

Refer to Figure 3-24.

No.	Item	Qty.	UM.	Description
1	22.9676.8605	1	EA	ASSY, YOKE STRUCTURE
2	22.9676.0609	1	EA	ASSY, FAN
3	22.9676.0610	1	EA	ASSY, TILT MOTOR
4	23.9650.3327	1	EA	ASSY, ELEC., RELAY
5	24.9661.1126	1	EA	PCB ASSY, SOLID STATE IGNITOR
6	25.9676.0030	2	EA	CABLE ASSY, IGNITOR TO RELAY **(not shown)**
	43.0298	2	EA	TOROID CORE ZW-42206-TC **(not shown)**
7	53.6525.0001	8	EA	SCREW, 6-32 X 5/16" PPZ
8	53.6558.0001	3	EA	SCREW, 6-32 X 3/8" PPZ
9	55.2143.0001	4	EA	STANDOFF, 1/4" HEX 6-32 1.313"
10	55.2150.0002	1	EA	STANDOFF, 1/4" HEX 6-32 1.187" MF
11	55.2201.0001	4	EA	SCREW, 4-40 X 5/16" PFB
12	55.3301.0006	2	EA	WASHER, #6 FLAT SS
13	55.6538.0001	6	EA	WASHER, #6 LOCK INTERNAL TOOTH
14	55.6541.0002	2	EA	GROMMET, 1" ID 1-3/4" OD 1-3/8" GRV DIA RUBBER
15	55.6583.0001	2	EA	STANDOFF, 1/4" HEX 6-32 .500" LG ALUM

Yoke Assembly (continued)

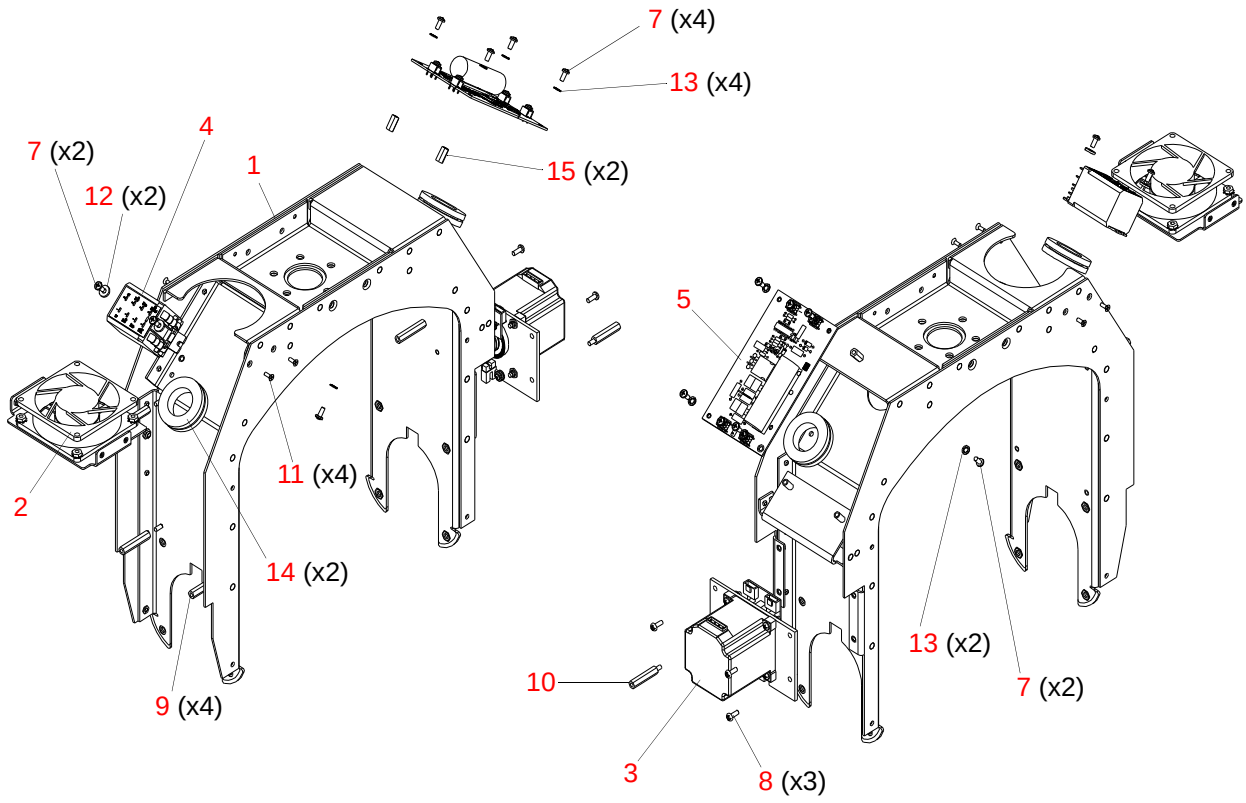


Figure 3-24: Yoke Assembly

Ignitor PCB Assembly

24.9661.1126 Rev C

Refer to Figure 3-25.

Replace as a complete assembly.

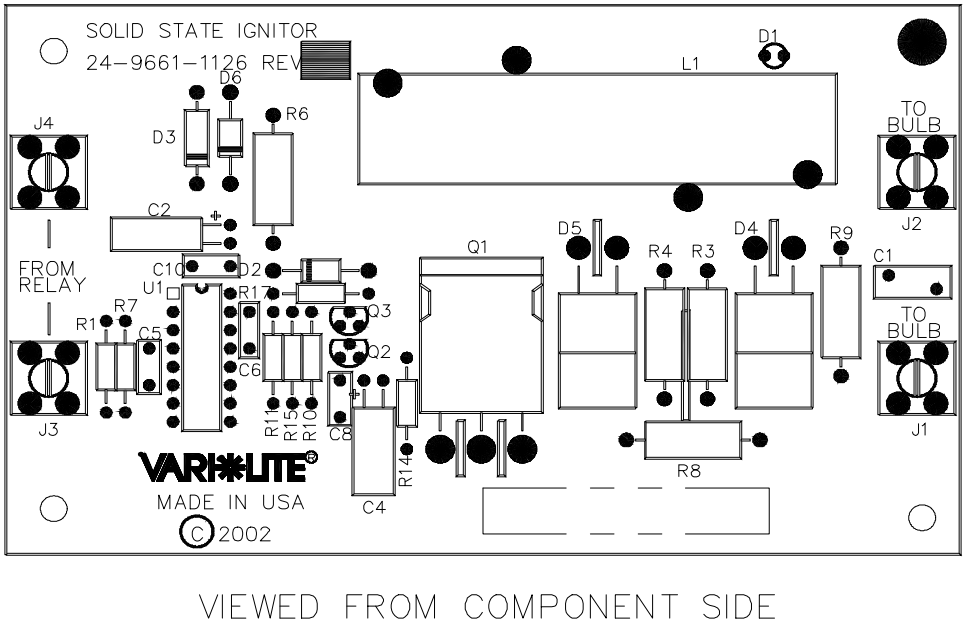


Figure 3-25: Ignitor PCB Assembly

Tilt Motor Assembly

22.9676.0610 Rev C

Refer to Figure 3-26.

No.	Item	Qty.	UM.	Description
1	10.9661.7298	1	EA	PLATE, TENSION ADJUST, PAN MOTOR
2	22.9661.0608	1	EA	ASSY, DRIVE PULLEY
-	- 10.9661.8640	1	EA	CODEWHEEL, 90 COUNT
-	- 10.9661.0649	1	EA	TIMING PULLEY, 2MM GT, 17 TOOTH
-	- 53.5561.0250	2	EA	SCREW, 6-40 X 1/4" SET CONE POINT
3	23.9661.1253	1	EA	ELEC ASSY, PAN EOT SENSOR
-	- 52.6524.0006	1	EA	CONN, HOUSING 6-POS RECEPTACLE
-	- 52.8346.0001	4	EA	CONTACT, 24-30 AWG FEMALE CRIMP
-	- 86.7002.0003	1	EA	SWITCH, SLOTTED OPTICAL
4	24.9661.9629	1	EA	PCB ASSY, PAN/TILT ENCODER
5	44.9678.0680	1	EA	MOTOR, 3-PHASE SZ 23 HIGH TORQUE
6	53.2203.0001	2	EA	SCREW, 4-40 X 1/4" PPZ
7	53.5506.0625	4	EA	SCREW, 6-32 X 5/8 " PPSS
8	55.6512.0001	2	EA	WASHER, #4 SPLIT LOCK
9	53.6520.0001	2	EA	SCREW, 4-40 X 3/8" PPZ
10	55.6621.0001	4	EA	WASHER, #4 FLAT ZINC

Tilt Motor Assembly (continued)

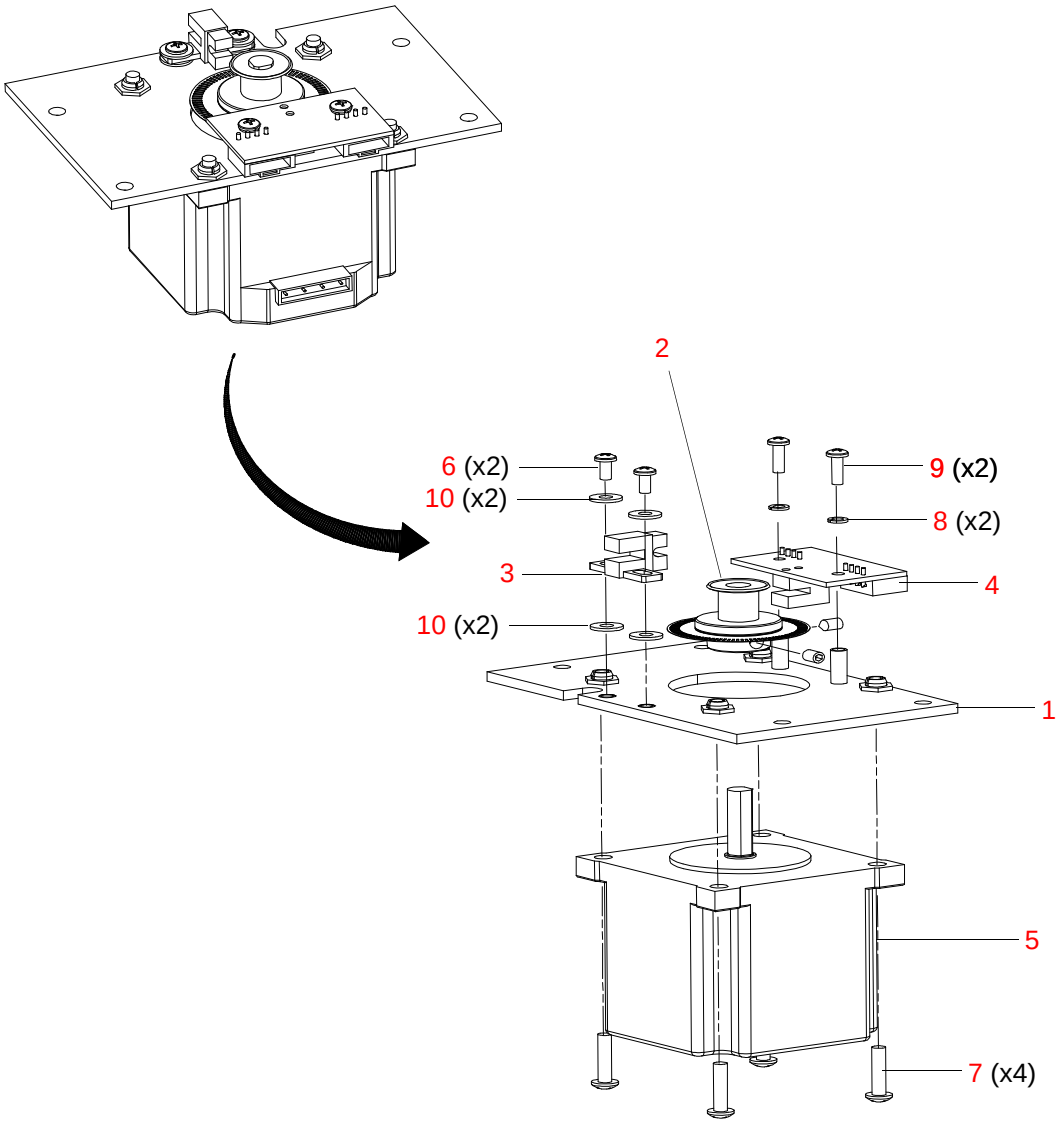


Figure 3-26: Tilt Motor Assembly

Pan/Tilt Encoder PCB Assembly

24.9661.9629 Rev B

Refer to Figure 3-27.

Replace as a complete assembly.

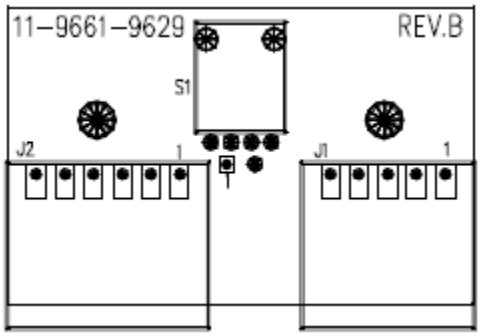


Figure 3-27: Pan/Tilt Encoder PCB Assembly

Yoke Fan Assembly

22.9676.0609 Rev A

Refer to Figure 3-27.

No.	Item	Qty.	UM.	Description
1	10-9676.0646	1	EA	FAN TRAY, YOKE ARM
2	40.7113.0001	1	EA	FAN, +24V 80 X 80 X 25 MM 32CFM
3	52.6396.2202	1	EA	RECPT, 2POS MTA100 W/ POL TAB RED CLSD END
4	53.2200.0006	4	EA	NUT, 6-32 KEPS SS

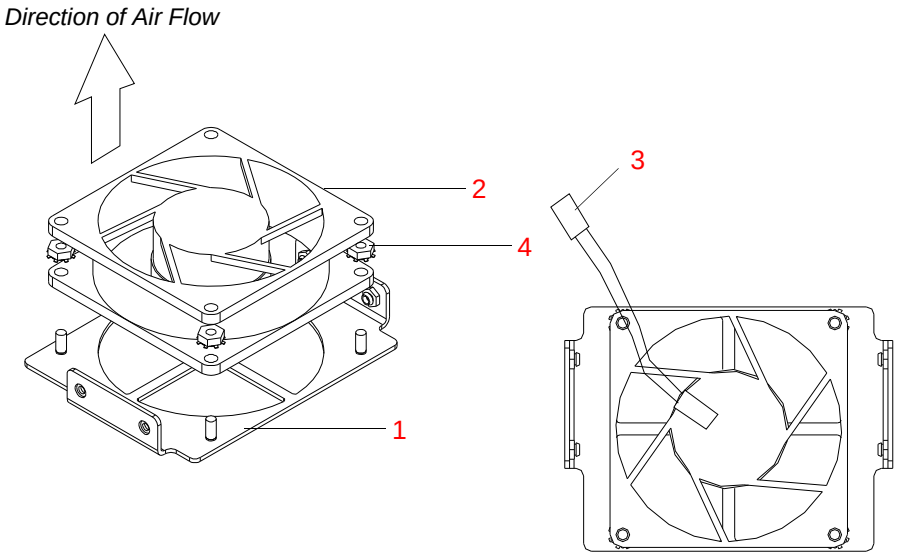


Figure 3-28: Yoke Fan Assembly

Enclosure

Upper Enclosure Assembly

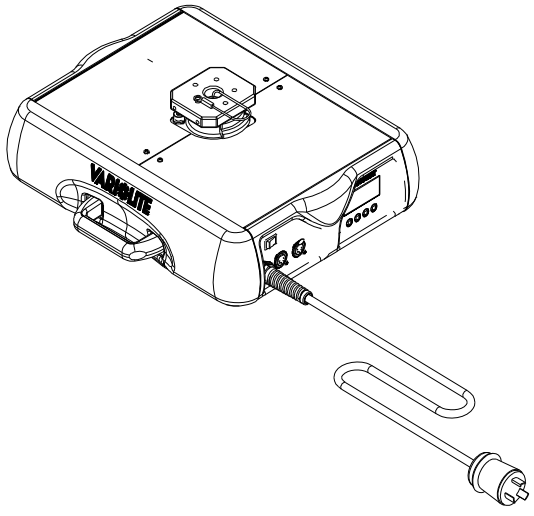
21.9676.0800 Rev T

Refer to **Figures 3-29** and **3-30**.

No.	Item	Qty.	UM.	Description
1	04.9640.0374	1	EA	LABEL, P.E. GROUND
2	04.9673.0040	1	EA	LABEL, 2000 SERIES COMPLIANCE
3	04.9661.1218.01	1	EA	LABEL, PATENT, VL2201 & VL2400 SERIES LUMINAIRES
4	10.9661.1258	1	EA	BRACKET, APS SIDE
5	10.9661.1358	1	EA	AIR SEAL, DUCT
6	06.6032.0009	1	EA	CABLE MARKER TIE, 19 X .7
7	10.9678.1874	1	EA	PLENUM, AIR DISTRIBUTION, 700W BALLAST
8	55.6658.0009	1	EA	STANDOFF, 1/4" HEX 6-32 X 3/4"
9	10.9678.0820	1	EA	LANYARD, PAN TUBE
10	10.9678.0839	2	EA	COVER, TOP
11	10.9686.0846	2	EA	HANDLE, CAST
12	10.9678.0869	1	EA	BRACKET, LVS
13	10.9678.0886	1	EA	SPACER, PAN BEARING 0.235" THK
14	10.9678.0892	1	EA	BUSHING, WIRE PROTECTION, PAN TUBE
15	12.9686.1236	2	EA	MACHINED, COVER SIDE
16	12.9686.1238	2	EA	MACHINED, COVER SIDE
17	12.9678.0842	1	EA	DUCT, UPPER ENCLOSURE AIR
18	55.6538.0001	1	EA	WASHER, INTERNAL TOOTH, # 6
19	21.9678.1254	1	EA	ASSY, COVER - VENTILATION
20	21.9678.0767	1	EA	ASSY, STABLIZER
21	21.9676.0805	1	EA	ASSY, CONNECTOR PANEL
22	21.9678.0807	1	EA	ASSY, PAN PULLEY
23	21.9678.0864	1	EA	ASSY, PAN MOTOR
24	21.9678.0880	1	EA	ASSY, PAN TUBE
25	22.9678.0851	1	EA	ASSY, UPPER ENCLOSURE
26	69.9676.0700	1	EA	ASSY, BALLAST MODULE, 700W ARC, SHIELDED
27	23.9678.0686	1	EA	FAN ASSY, UPPER ENCLOSURE
28	23.9678.0687	1	EA	ELEC ASSY, PAN EOT SENSOR
29	25.9661.1514	1	EA	CABLE ASSY, CHASSIS GROUND (**not shown**)

No.	Item	Qty.	UM.	Description
30	25.9661.1520	1	EA	CABLE ASSY, CHASSIS TO YOKE GROUND (**not shown**)
31	25.9676.0818	1	EA	CABLE ASSY, PAN/TILT CONTROL (**not shown**)
32	25.9678.0811	1	EA	CABLE ASSY, EMI FILTER TO POWER SWITCH (**not shown**)
33	25.9678.0812	1	EA	CABLE ASSY, AC INPUT SPLITTER (**not shown**)
34	25.9678.0813	1	EA	CABLE ASSY, DATA I/O LINK (**not shown**)
35	25.9678.1825	1	EA	CABLE ASSY, DISPLAY (**not shown**)
36	25.9678.0816	1	EA	CABLE ASSY, BALLAST TO CONTROLLER (**not shown**)
37	25.9678.0829	1	EA	CABLE ASSY, LAMP SUPPLY TO RELAY (**not shown**)
38	25.9678.0821	1	EA	CABLE ASSY, DC OUTPUT (**not shown**)
39	52.8295.0002	1	EA	TERMINAL STRIP, 300V 12 AWG 20A 2 POS.
40	53.2001.0003	1	EA	NUT, 10-32 NYLON INSERT
41	53.2019.0004	4	EA	NUT, 3/8-16 X 7/32 THK HEX JAM GRDS ZINC PLT
42	53.2200.0006	4	EA	NUT, 6-32 KEPS SS
43	53.6505.0022	3	EA	BOLT, 3/8-16 X 3/4" LG, CARRIAGE GRDS ZINC PLT
44	53.6513.0044	3	EA	SCREW, M5 X 10 MM STL CUP PT
45	53.6515.0001	4	EA	SCREW, 10-32 X 3/4" SCB CAP
46	53.6522.0004	2	EA	SCREW, 6-32 X 1/4" SOC HD CAP BLK
47	53.6525.0188	2	EA	SCREW, 6-32 X 3/16" LG PPZ SEMS
48	53.6530.0023	2	EA	RIVET, 1/8" OD POP .376-.500 GRP DOME HD STL MND
49	53.6539.0001	4	EA	WASHER, 3/8" SPLIT LOCK
50	53.6545.0003	3	EA	SCREW, 8-32 X 3/8" PFZ
51	53.6545.0004	4	EA	SCREW, 8-32 X 3/8" PPZ
52	53.6556.0002	1	EA	SCREW, 4-40 X 3/4" LG PPB
53	53.6558.0009	13	EA	SCREW, 6-32 X 3/8" PPZ SEMS-EXT W/ SHR
54	53.6558.0010	11	EA	SCREW, 6-32 X 1/4" LG PPZ BLK SEMS-EXT W/ SHR
55	53.6558.0015	4	EA	SCREW, 6-32 X 3/8" PPB SEMS
56	53.6571.0003	1	EA	SCREW, 6-32 X 1.5" PPB
57	53.6591.0001	2	EA	SCREW, 6-32 X 1/4" PFZ
58	55.6677.0039	8	EA	WASHER, .438" OD .0219" ID .04 THK
59	53.6522.0001	1	EA	SCREW, 6-32 X 1/4" PPZ
60	53.6609.0001	4	EA	SCREW, 6-32 X 3/8" PFZ
61	53.6626.0001	1	EA	SCREW, 10-32 X 1/2" PPZ
62	53.6634.1000	1	EA	SCREW, 3/8-16 X 1.00" LG SOC HD CAP ALLY STL
63	53.6653.0502	4	EA	SCREW, 1/4-20 X 1/2" LG SOC HD CAP ZINC
64	54.1206.0014	2	EA	RING, RETAINING, 1.375" SHAFT 1.291" DIA GRV X .056" WD
65	54.1255.0001	1	EA	BEARING ASSY, BLACK FLUSH MOUNT HOUSING
66	54.2055.0001	1	EA	BELT, TIMING S2M 210 GRV 9 MM WIDE URTH/KVLR
67	55.2150.0003	2	EA	STANDOFF, 1/4" HEX 6-32 X 1.125" LG FF STL

No.	Item	Qty.	UM.	Description
68	55.2178.0001	2	EA	CABLE ANCHOR, MOUNT, #8 SCREW MOUNTING
69	55.2179.0001	3	EA	CABLE ANCHOR, MOUNT, #6 SCREW MOUNTING
70	55.6580.0002	2	EA	CABLE TIE, .18" W X 8.00" LG
71	55.2261.0001	1	EA	SLEEVE, NYL, INSUL, #6 SCREW 1.0" LG .015 WALL
72	55.2267.0001	2	EA	RUBBER STRIP, SPONGE CLSD CELL 3/8" W 3/16" TALL
73	55.2178.0001	2	EA	CABLE ANCHOR MOUNT, # 8 SCREW MOUNTING
74	55.6532.0004	2	EA	BRACKET, 6-32 THREADED HOLES (#4334)
75	55.6543.0001	0.146	FT	GROMMET STRIP, SERRATED
76	55.6543.0002	1.08	FT	GROMMET STRIP, SERRATED, 1/8" OPENING
77	55.6549.0001	4	EA	WASHER, 1/4" SPLIT LOCK
78	55.6568.0074	2	EA	SPRING, CPRSN .420" OD .75" LG .055 DIA WIRE
79	55.6677.0044	1	EA	WASHER, .877" OD .170" ID .093" THK FLAT NYL
80	55.6575.0001	4	EA	SCREW, 10-32 X 3/4" PPB
81	55.6577.0005	2	EA	STANDOFF, 1/2" HEX 6-32 1.625" LG NYLON
82	55.6775.0009	1	EA	BUSHING, SNAP .750" ID 1" MT HL NYLON BLK
83	67.4018.0001	1	EA	FERRITE, 26 X 28.5 X 13MM CYL
84	67.4021.0002	1	EA	FILTER, EMI CCI
85	68.9678.0827	1	EA	CHOKE, COMMON MODE
86	69.3177.0151	1	EA	POWER SUPPLY, 150W +24V/6.3A W/ MNT PLT
87	55.6799.0001	A. R.	EA	SHIM, 1.375" ID 1.875" OD .010 THK
88	55.6799.0002	A. R.	EA	SHIM, 1.375" ID 1.875" OD .005 THK



Upper Enclosure Assembly (continued)

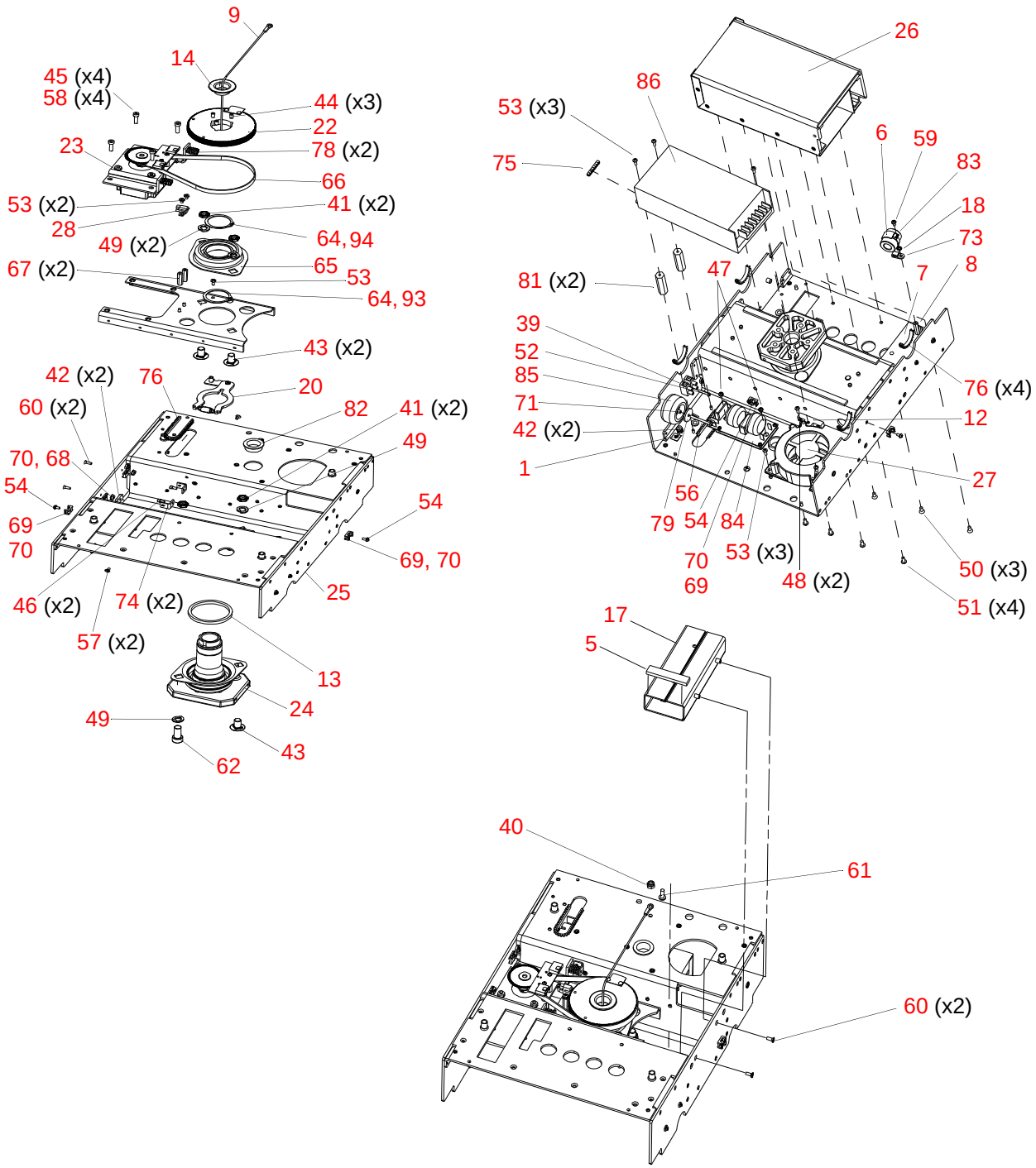


Figure 3-29: Upper Enclosure Assembly

Upper Enclosure Assembly (continued)

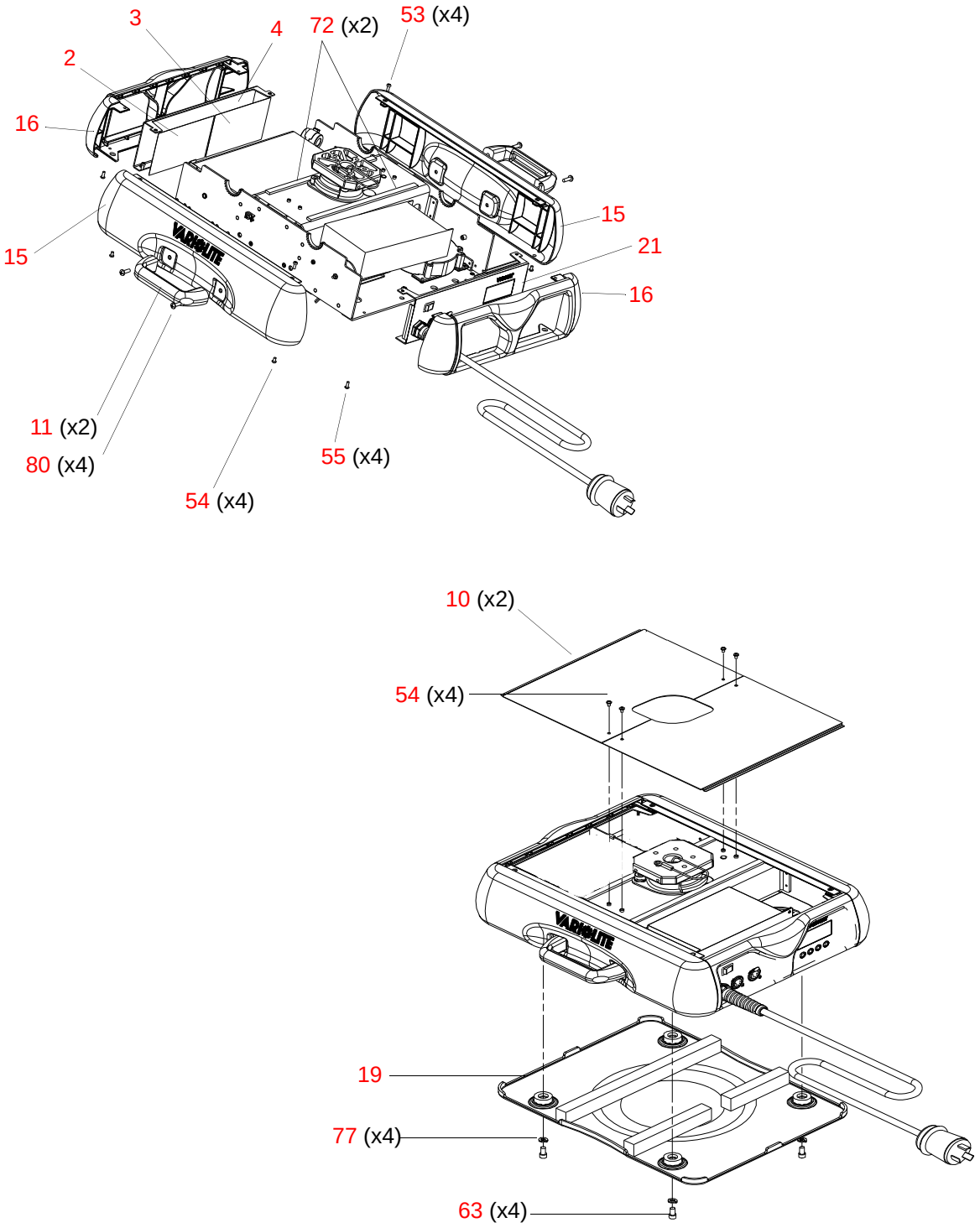


Figure 3-30: Upper Enclosure Assembly

Connector Panel Assembly

21.9676.0805 Rev A

Refer to Figure 3-31.

No.	Item	Qty.	UM.	Description
1	10.9678.0852.01	1	EA	LAYOUT, ENCLOSURE OVERLAY
2	10.9678.0859	1	EA	BRACKET, INPUT
3	24.9663.3895	1	EA	PCB ASSY, DMX INPUT
4	24.9678.3825	1	EA	PCB ASSY, DISPLAY
5	25.9678.0810	1	EA	CABLE ASSY, AC INPUT PIGTAIL
6	51-0541	4	EA	SCREW, 4-X 3/8" H/L BLK ZINC PLT
7	53.6558.0009	2	EA	SCREW, 6-32 X 3/8" PPZ SEMS EXT ZINC PLT
8	55.2284.0001	1	EA	CARD GUIDE, SNAP-IN 3" LONG NYLON NATURAL
9	74.2000.0002	1	EA	SWITCH, ROCKER, 16A 125VAC HORIZ NON-ILLUM
10	10.9678.0872	1	EA	STIFFNER, DISPLAY BOARD (NOT SHOWN)

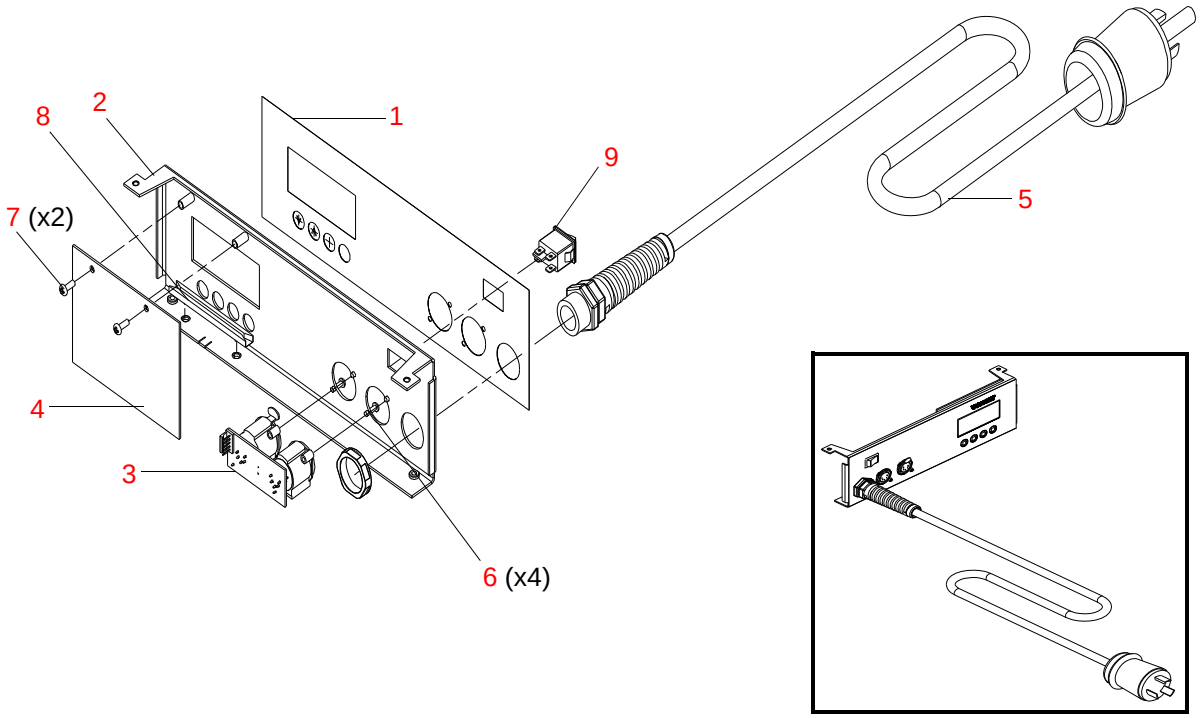


Figure 3-31: Connector Panel Assembly

DMX Input PCB Assembly

24.9663.3895 Rev 0

Refer to Figure 3-32

No.	Item	Qty.	UM.	Description	Ref.
1	17.9663.3895	1	EA	PCB ASSY SM, DMX INPUT	-
2	52.6259.0006	1	EA	HEADER, 5POS MTA FRCT LOK STRT	J3
3	52.6625.0006	1	EA	CONN, RECEPT XLR 5PIN FEMALE	J1
4	52.6626.0006	1	EA	CONN, RECEPT XLR 5PIN MALE	J2
5	62.3039.0102	1	EA	CAP, 1000PF 250V 20% CD X-Y	C1

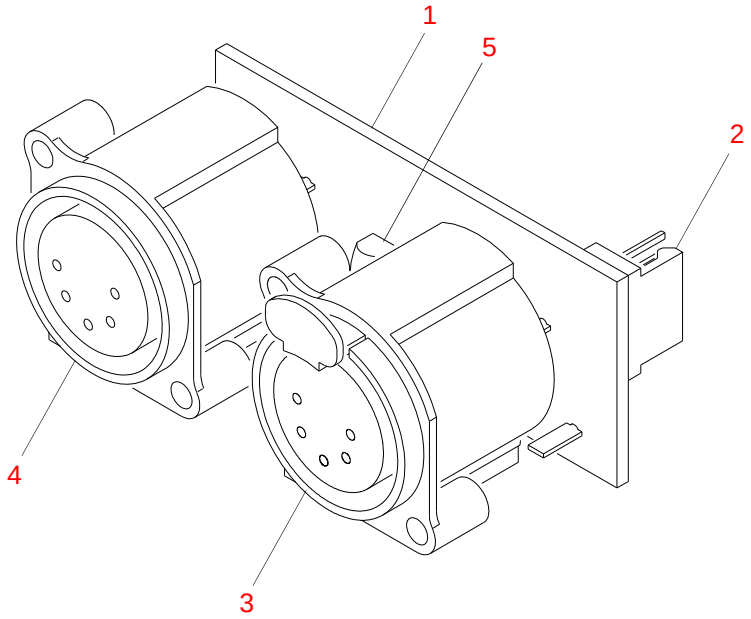


Figure 3-32: DMX Input PCB Assembly

AC Input Pigtail Cable Assembly

25.9678.0810 Rev B

Refer to Figure 3-32

No.	Item	Qty.	UM.	Description
1	52.6274.2313	1	EA	STRAIN RELIEF, SKINTOP FLEXTYPE PG13 BLK
2	52.6401.2321	1	EA	CONN, PLUG "CE MARKED" 20A 250V TWIST LOCK
3	52.8231.0005	1	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
4	52.8298.1160	2	EA	FERRULE, WIRE 1X16 AWG L2=8MM BLACK
5	55.2268.0187	0.92	FT	HEATSHRINK, 3/16" CLEAR KYNAR 150 DEG C
6	55.2268.0500	0.13	FT	HEATSHRINK, 1/2" CLEAR KYNAR 150 DEG C
7	73.9636.0153	4.00	FT	CORDAGE, 1.5/3 750V 60 DEG C EURO BLK HD22

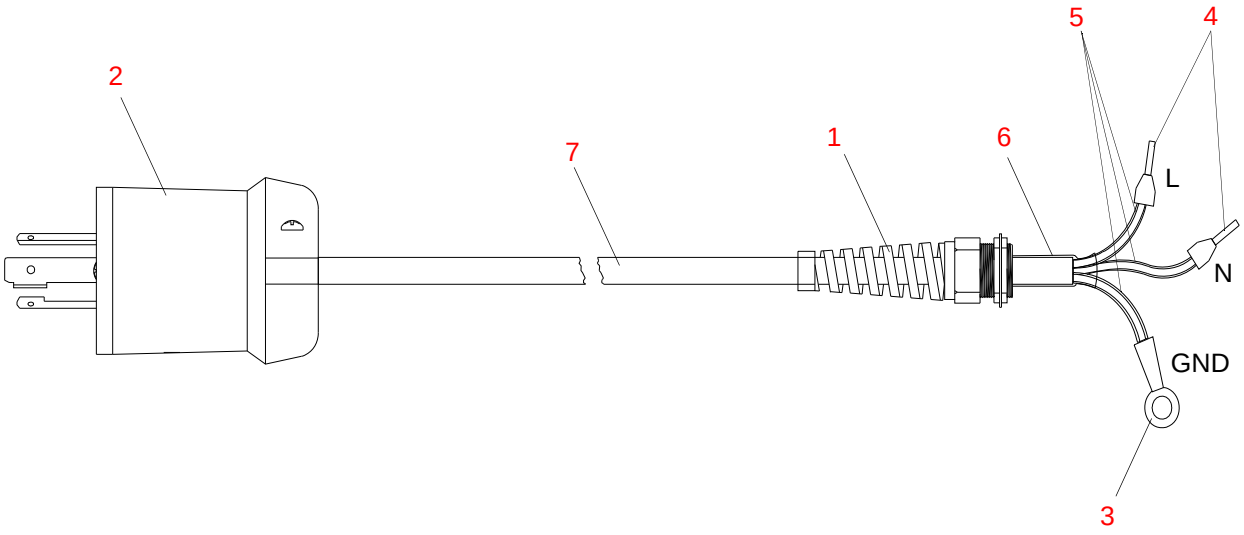


Figure 3-33: DMX Input PCB Assembly

Pan Tube Assembly

21.9678.0880 Rev C

Refer to Figure 3-34.

No.	Item	Qty.	UM.	Description
1	10.9678.0809	1	EA	PAN TOGGLE STOP
2	10.9678.0847	1	EA	WASHER, SILICONE FOAM
3	10.9678.0848	2	EA	WASHER, PAN TEFLON
4	12.9678.0891	1	EA	PAN TUBE, MACHINED
5	54.1206.0021	1	EA	RING, RETAINING 1.562" SHAFT 1.468" GRV DIA
6	54.1255.0002	1	EA	BEARING ASSY, FLUSH MOUNT HOUSING LARGE

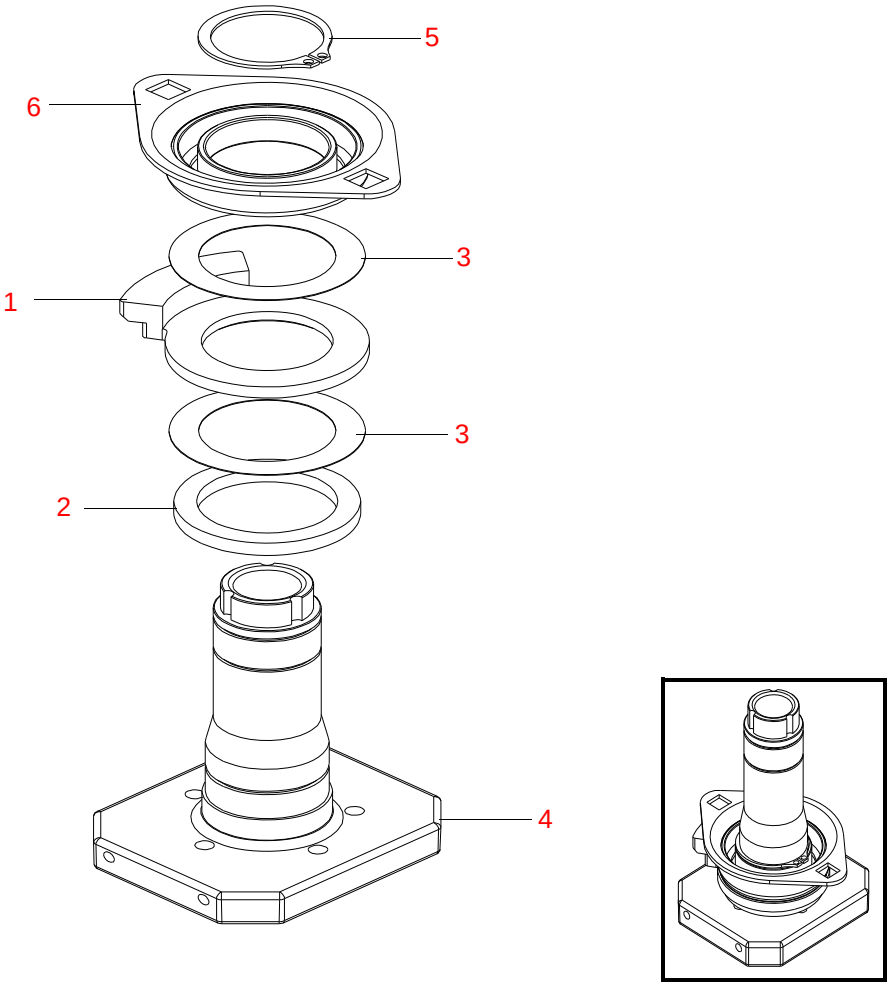


Figure 3-34: Pan Tube Assembly

Pan Motor Assembly

21.9678.0864 Rev E

Refer to Figure 3-35.

No.	Item	Qty.	UM.	Description
1	10.9678.0865	1	EA	PLATE, PAN MOTOR MOUNT
2	21.9678.0828	1	EA	ASSY, DRIVE PULLY, PAN
3	24.9678.9729	1	EA	PCB ASSY, VL2203 PAN/TILT ENCODER
4	44.9678.0680	1	EA	MOTOR, 3-PHASE SIZE 23 HIGH TORQUE
5	53.2200.0008	4	EA	NUT, 8-32 KEPS SS
6	53.6546.0001	4	EA	SCREW, 8-32 X 5/8" PPB
7	53.6682.0002	2	EA	SCREW, 4-40 X 1/4" LG PPZ SEMS-EXT
8	55.2132.0014	2	EA	STANDOFF, 1/4" HEX 4-40 1.062" LG CS

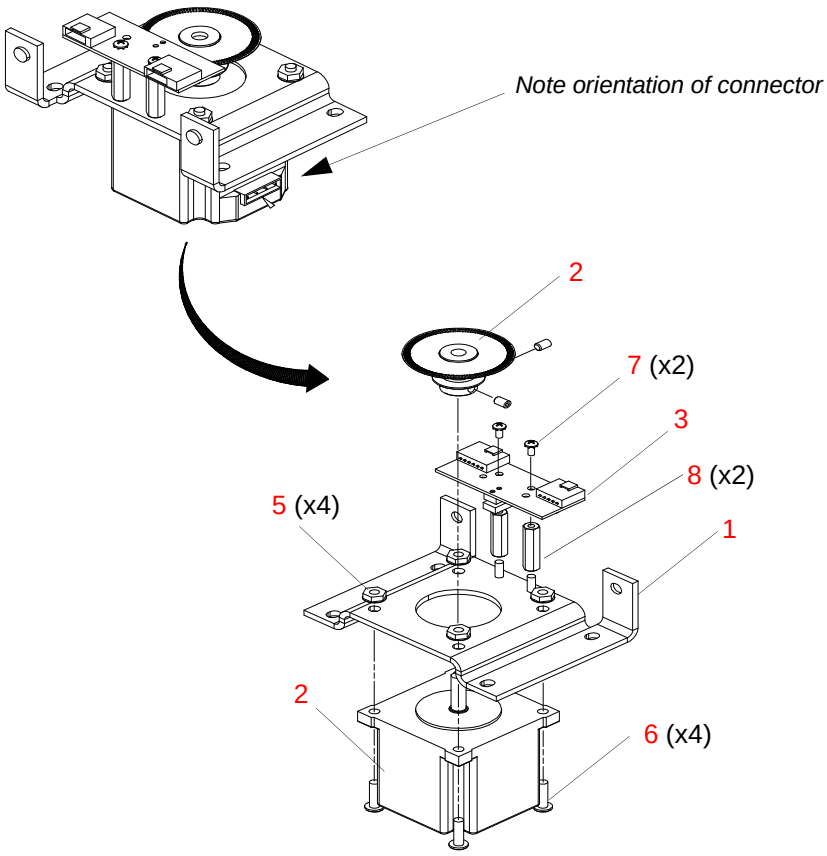


Figure 3-35: Pan Motor Assembly

Upper Enclosure Fan Assembly

23.9678.0686 Rev 0

Refer to Figure 3-35.

No.	Item	Qty.	UM.	Description
1	40.7125.0001	1	EA	FAN, 24V FAL6F24LH
2	52.8231.0007	2	EA	TERM, SPADE #6 26-24 AWG INS YELLOW

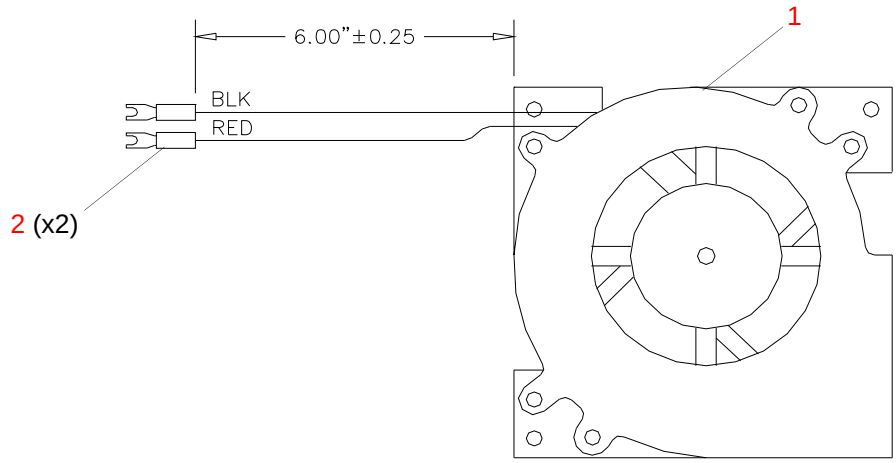


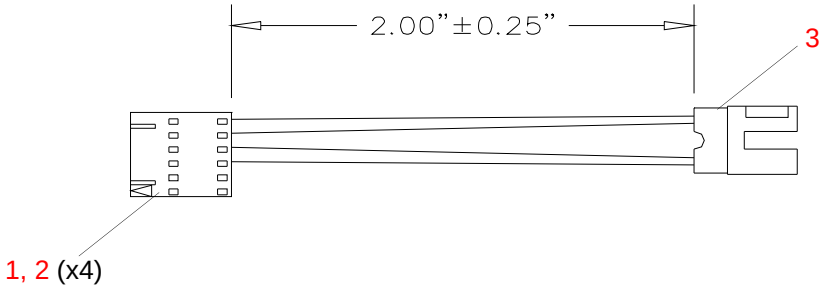
Figure 3-36: Upper Enclosure Fan Assembly

Pan EOT Sensor Electrical Assembly

23.9678.0687 Rev A

Refer to Figure 3-37.

No.	Item	Qty.	UM.	Description
1	52.6524.0006	1	EA	CONN, HOUSING 6 POS. RECEPTACLE
2	52.8346.0001	4	EA	CONTACT, 24-30 AWG FEMALE CRIMP
3	86.7002.0003	1	EA	SWITCH, SLOTTED OPTICAL



WIRE CHART		
CONNECTOR	SENSOR	DESCRIPTION
PIN 1	N.C.	NO CONNECTION
PIN 2	N.C.	NO CONNECTION
PIN 3	BLACK	IRED CATHODE
PIN 4	RED	IRED ANODE
PIN 5	GREEN	DETECTOR EMITTER
PIN 6	WHITE	DETECTOR COLLECTOR

Figure 3-37: Pan EOT Sensor Electrical Assembly

Ballast Module (Arc Power Supply) Assembly

69.9676.0700 Rev 0

Refer to **Figure 3-38**.

Replace as a complete assembly.

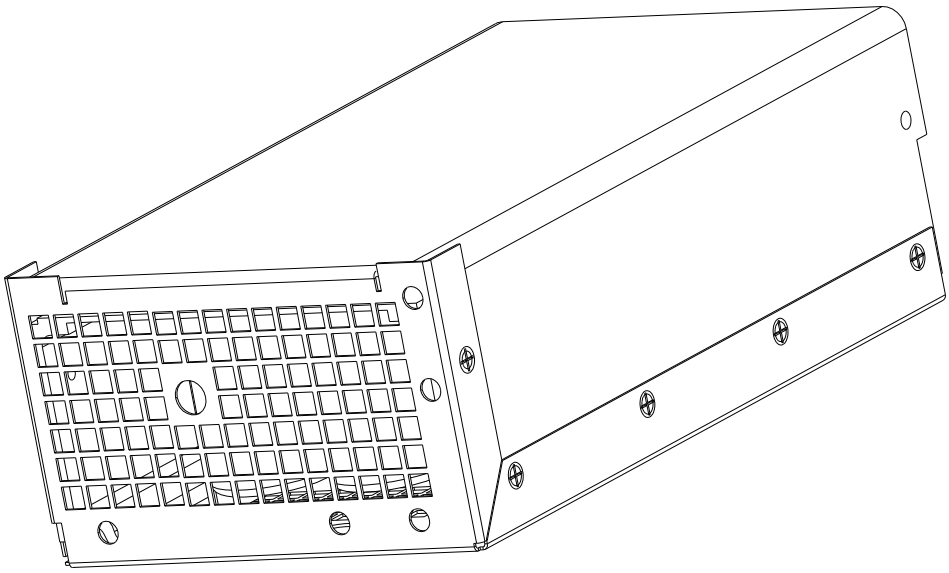


Figure 3-38: Ballast Module (Arc Power Supply) Assy

Notes

Cables

Ground Strap Cable Assembly

25.8007.2212 Rev 0

Replace as a complete assembly.

Refer to Figure 3-48.

No.	Item	Qty.	UM.	Description
1		2	EA	TERM, RING # 6 22-16 AWG NON-INS
2		0.33	FT	WIRE, 7/64" TUBULAR BRAID SILVER-PLATED

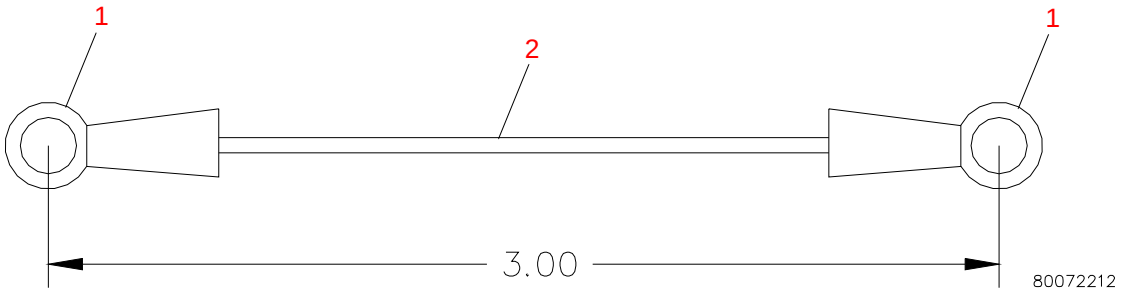


Figure 3-48: Ground Strap Cable Assembly

LVS Chassis Ground Cable Assembly

25.9661.1514 Rev A

Replace as a complete assembly.

Refer to Figure 3-49.

No.	Item	Qty.	UM.	Description
1		1	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
2		1	EA	FASTON RECEPT, 16-14 AWG (REEL)
3		3.5	IN	WIRE, 16 AWG 300V 105C PVC GRN/YEL UL1569

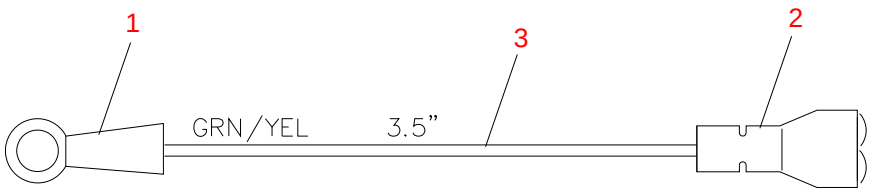


Figure 3-49: LVS Chassis Ground Cable Assembly

Chassis To Yoke Ground Cable Assembly

25.9661.1520 Rev C

Replace as a complete assembly.

Refer to Figure 3-50.

No.	Item	Qty.	UM.	Description
1		2	EA	TERM, #8, RING, 10AWG
2		15.17	FT	WIRE, 22AWG 300V 200C TEF GRN/YEL UL1180

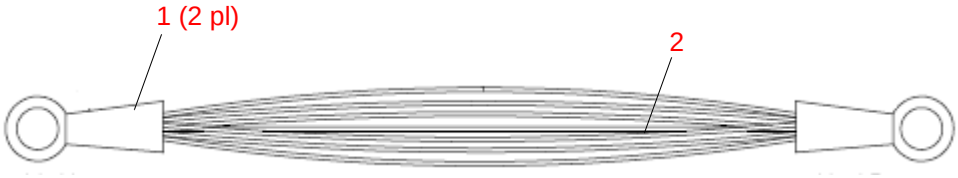


Figure 3-50: Chassis To Yoke Ground Cable Assembly

Yoke To Head Ground Cable Assembly

25.9667.0028 Rev A

Replace as a complete assembly.

Refer to Figure 3-50.

No.	Item	Qty.	UM.	Description
1		2	EA	TERM, #8, RING, 10AWG
2		15.17	FT	WIRE, 22AWG 19X34 MIL-16878/4 TYPE E

Figure 3-51: Chassis To Yoke Ground Cable Assembly

Ignitor To Relay Cable Assembly

25.9676.0030 Rev 0

Replace as a complete assembly.

Refer to Figure 3-52.

No.	Item	Qty.	UM.	Description
1		1	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
2		1	EA	RECP, FASTON 1/4" 18-14 AWG INSULATED VO
3		1.17	FT	WIRE, 14AWG 15KV 150C SILICONE 41/30 STRANDING

Figure 3-52: Ignitor To Relay Cable Assembly

Tilt Plate Ground Cable Assembly

25.9667.0413 Rev A

Replace as a complete assembly.

Refer to Figure 3-53.

No.	Item	Qty.	UM.	Description
1		1	EA	TERM, RING #6 BLUE 14-16 AWG NON-INS.
2		0.21	FT	WIRE, 7/64" TUBULAR BRAID SILVER PLATED

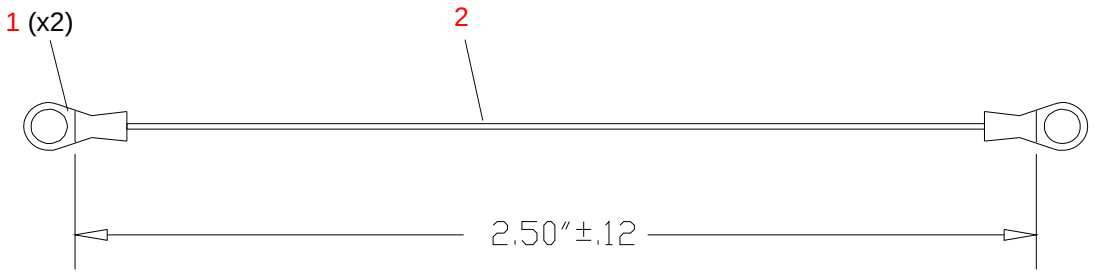


Figure 3-53: Tilt Plate Ground Cable Assembly

Color/Gobo T-Stat Cable Assembly

25.9676.0125 Rev B

Replace as a complete assembly.

Refer to Figure 3-54.

No.	Item	Qty.	UM.	Description
1		1	EA	CONN, HOUSING 2POS. PLUG SHROUD
2		2	EA	CONTACT, 24-30 AWG MALE CRIMP
3		1.00	IN	HEATSHRINK, 1/8" CLEAR KYNAR
4		1	EA	THERMOSTAT, 105 DEG C, PCB MOUNT
5		0.50	FT	WIRE, 24 AWG 300V 105 DEG C PVC GRAY

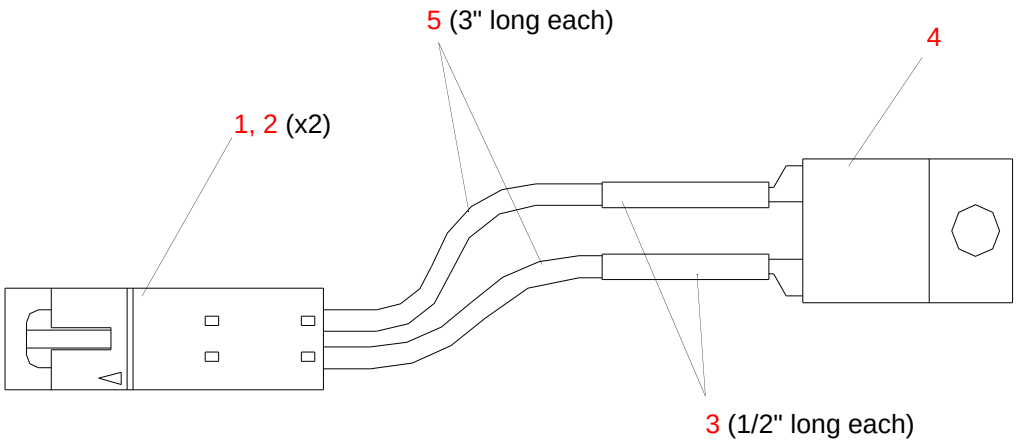


Figure 3-54: Color/Gobo T-Stat Cable Assembly

Color/Fixed Bulkheads Cable Assembly

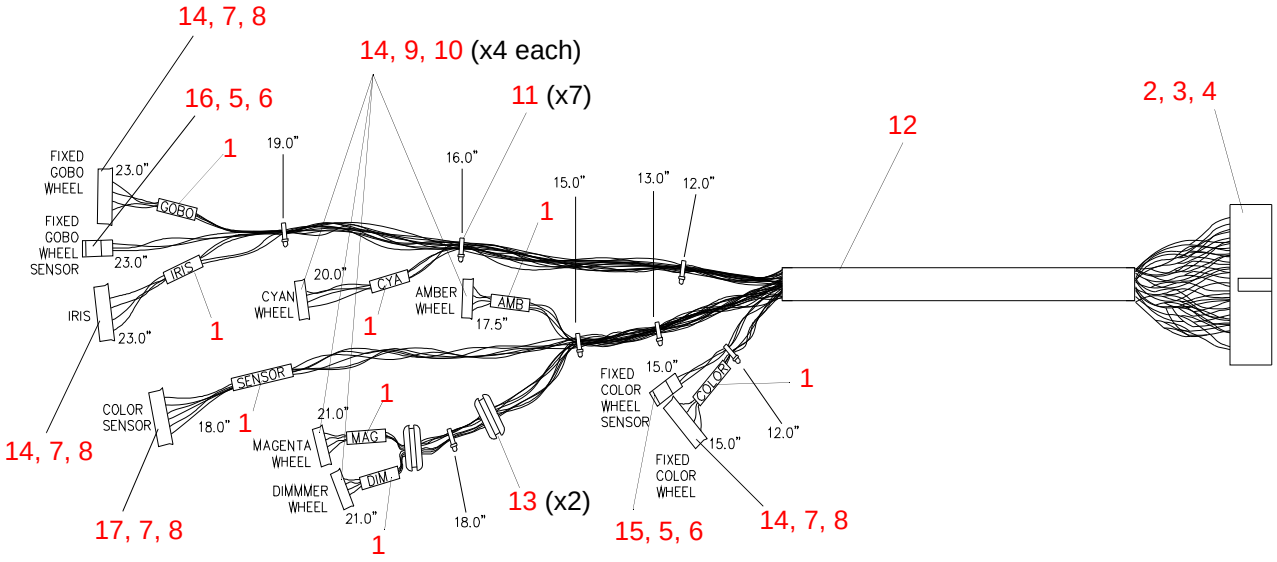
25.9676.0715 Rev F

Replace as a complete assembly.

Refer to Figure 3-55.

No.	Item	Qty.	UM.	Description
1		1	EA	LABEL SET, VL2500 COLOR HARNESS
2		1	EA	HOUSING, 40 POS DBL ROW UNLOADED
3		1	EA	COVER, FRONT 40 POS MT LATCHING
4		1	EA	COVER, BACK 40 POS MT
5		2	EA	RECEPT, 3 POS MTA100 W/POL TAB BLUE CLOSED END
6		2	EA	COVER, 3 POS CLOSED END STRAIN RELIEF MTA100
7		4	EA	CONN, FEMALE 6 POS 30-24 AWG CRIMP PHR
8		18	EA	CONTACT, SOCKET 30-24 AWG CRIMP (REEL) PH (JST)
9		4	EA	CONN, RECEPT 6CIR WIRE TO WIRE 1.25 MM PITCH
10		16	EA	CONTACT, 26-28 AWG FEMALE, CRIMP 1.25 MM PITCH (REEL)
11		7	EA	CABLE TIE, .10" X 4" LG SMALL
12		0.67	FT	SLEEVING, 3/4" NOM. DIA. WOVEN POLY, ROUNDIT 2000
13		2	EA	GROMMET, 9/32" ID, 9/16" OD, 1/4TH SILICONE
14		11.71	FT	WIRE, 26 AWG 4 COND 300V 200 DEG C TEF <BLK-BRN-RED-ORN> UL1180
15		1.25	FT	WIRE, 26 AWG 3 COND 300V 200 DEG C TEF <BLK-RED-WHT/BLK> UL1180
16		1.92	FT	WIRE, 26 AWG 3 COND 300V 200 DEG C TEF <BLK-RED-WHT/GRN> UL1180
17		1.50	FT	WIRE, 28 AWG 6 COND 300V 200 DEG C TEF <BLK-WHT/BLU-WHT/YEL-WHT/BLK-WHT/PUR-RED> UL1180
-		40	EA	CONTACT, 26-22 AWG RECP MTE (NOT SHOWN)

Color/Fixed Bulkheads Cable Assembly (cont.)



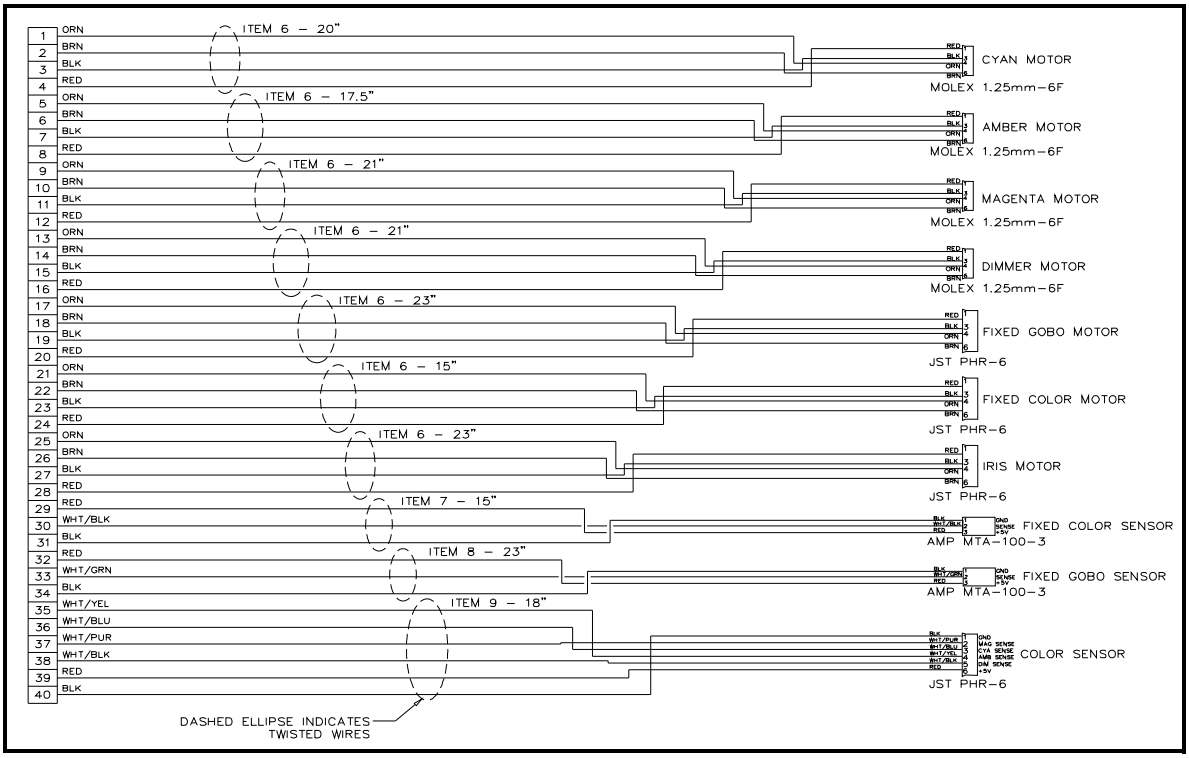


Figure 3-55: Color/Fixed Bulkheads Cable Assembly

Optics/Strobe Bulkheads Cable Assembly

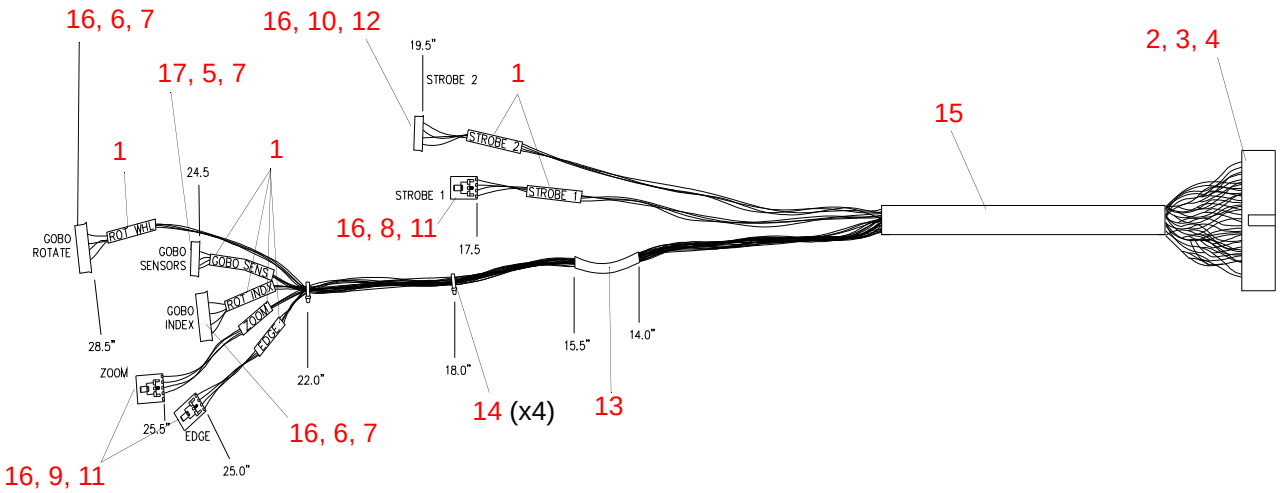
25.9676.0716 Rev F

Replace as a complete assembly.

Refer to Figure 3-56.

No.	Item	Qty.	UM.	Description
1		1	EA	LABEL SET, VL2500 COLOR HARNESS
2		1	EA	HOUSING, 34 POS 26-22 AWG DBL ROW UNLOADED
3		1	EA	COVER, FRONT 34 POS MT LATCHING
4		1	EA	COVER, BACK 34 POS MT
5		1	EA	CONN, FEMALE 4 POS 30-24 AWG CRIMP PHR
6		2	EA	CONN, FEMALE 6 POS 30-24 AWG CRIMP PHR
7		12	EA	CONTACT, SOCKET 30-24 AWG CRIMP (REEL) PH (JST)
8		2	EA	CONN, HOUSING 4 POS RECEPT
9		1	EA	CONN, HOUSING 5 POS RECEPT
10		1	EA	CONN, RECEPT 6CIR WIRE TO WIRE 1.25 MM PITCH
11		12	EA	CONTACT, 24-30 AWG FEMALE CRIMP
12		4	EA	CONTACT, 26-28 AWG FEMALE, CRIMP 1.25 MM PITCH (REEL)
13		0.13	FT	HEATSHRINK, 1/2" BLACK
14		4	EA	CABLE TIE, .10" X 4" LG SMALL
15		0.92	FT	SLEEVING, 3/4" NOM. DIA. WOVEN POLY, ROUNDIT 2000
16		11.71	FT	WIRE, 26 AWG 4 COND 300V 200 DEG C TEF <BLK-BRN-RED-ORN> UL1180
17		2.04	FT	WIRE, 26 AWG 4 COND 300V 200 DEG C TEF <BLK-RED-WHT-WHT/RED> UL1180
-		34	EA	CONTACT, 26-22 AWG RECP MTE (REEL) (NOT SHOWN)

Optics/Strobe Bulkheads Cable Assy (cont.)



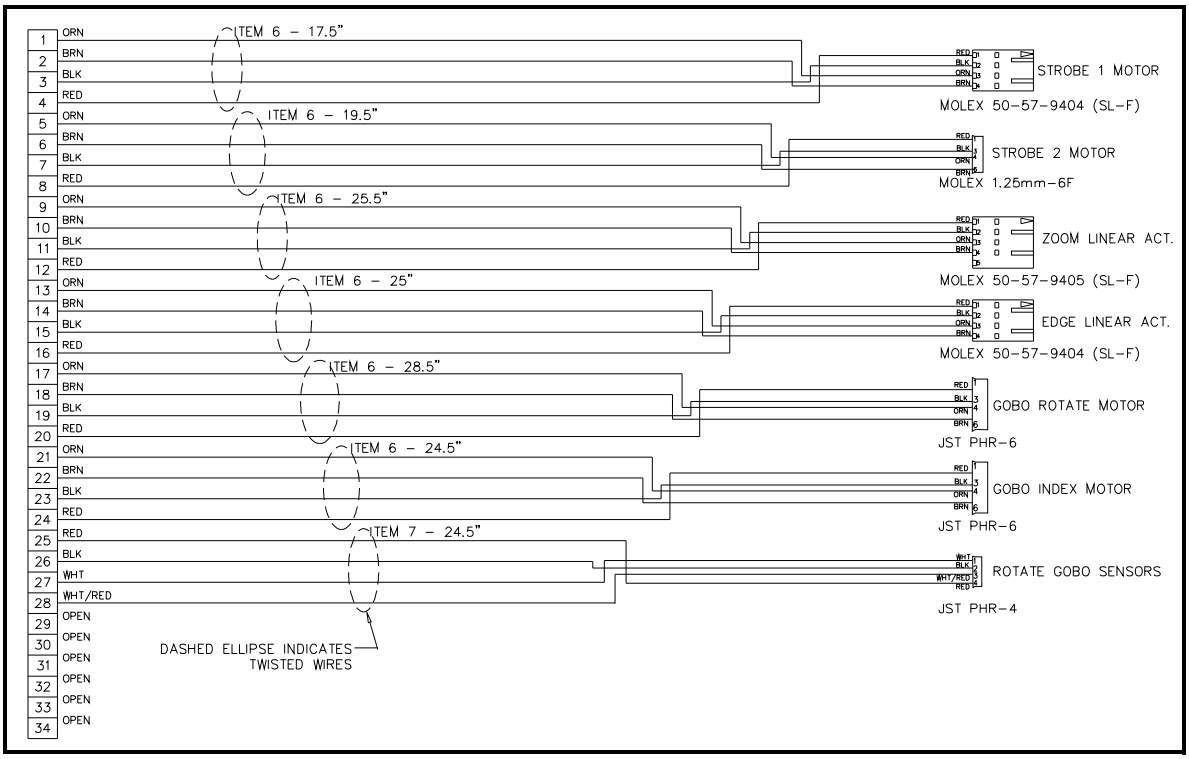


Figure 3-56: Optics/Strobe Bulkheads Cable Assembly

Strobe 1 Cable Assembly

25.9676.0717 Rev B

Replace as a complete assembly.

Refer to Figure 3-57.

No.	Item	Qty.	UM.	Description
1		1	EA	LABEL, STROBE 1
2		1	EA	CONN, HOUSING 4 POS PLUG SHROUDED WIRE TO WIRE
3		1	EA	CONN, RECEPT 6CIR WIRE TO WIRE 1.25 MM PITCH
4		4	EA	CONTACT, 24-30 AWG MALE CRIMP
5		4	EA	CONTACT, 26-28 AWG FEMALE, CRIMP 1.25 MM PITCH (REEL)
6		1	EA	GROMMET, 9/32" ID, 9/16" OD, 1/4TH SILICONE
7		0.92	FT	WIRE, 26 AWG 4 COND 300V 200 DEG C TEF <BLK-BRN-RED-ORN> UL1180

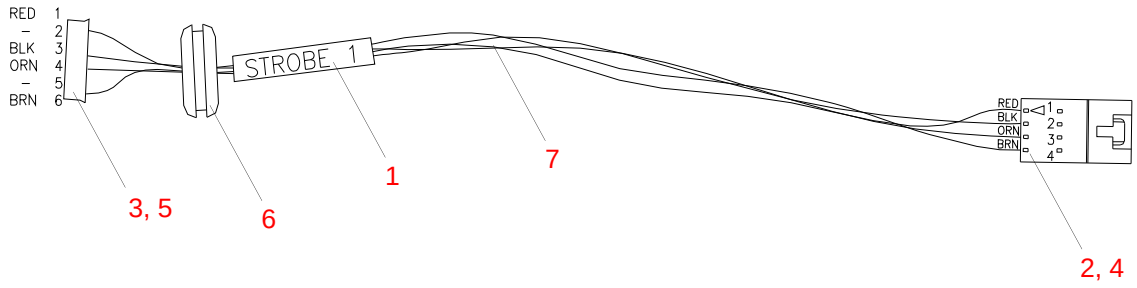


Figure 3-57: Strobe 1 Cable Assembly

Fans/Disconnect Cable Assembly

25.9676.0718 Rev G

Replace as a complete assembly.

Refer to Figure 3-58.

No.	Item	Qty.	UM.	Description
1		1	EA	RECEPT, 3 POS MTA100 W/ POL TAB 24 AWG
2		1	EA	CONN, HOUSING 2 POS RECEPT
3		1	EA	CONN, HOUSING 5 POS RECEPT
4		2	EA	RECEPT, 1/4" FASTON 22-18 AWG
5		7	EA	CONTACT, 24-30 AWG FEMALE CRIMP
6		1	EA	CABLE TIE, .10" X 4" SMALL
7		2.46	FT	WIRE, 26 AWG 300V 200 DEG C TEFLON RED
8		2.19	FT	WIRE, 26 AWG 300V 200 DEG C TEFLON GRY
9		2.08	FT	WIRE, 26 AWG 300V 200 DEG C TEFLON BLK
-		.92	FT	SLEEVING, 5/16" NOM DIA WOVEN POLY (NOT SHOWN)

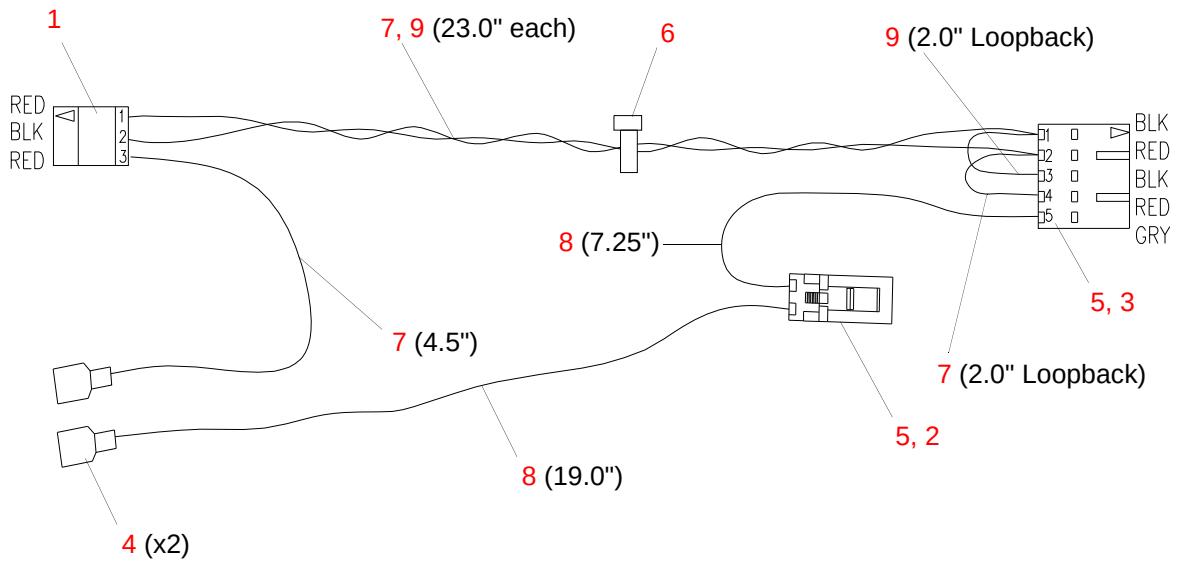


Figure 3-58: Fans/Disconnect Cable Assembly

OT Switch to Reflector Assy. Cable Assembly

25.9676.0719 Rev A

Replace as a complete assembly.

Refer to Figure 3-59.

No.	Item	Qty.	UM.	Description
1		1	EA	RECEPT, FASTON 24-22 AWG NON-INSUL 0.016" TAB 110SERIES
2		1	EA	RECEPT, FASTON 24-20 AWG UNINSUL TIN PLT BRS .250 X 0.32
3		0.67	FT	WIRE, 24 AWG 600V 200 DEG C TEFLON GRAY TYPE E

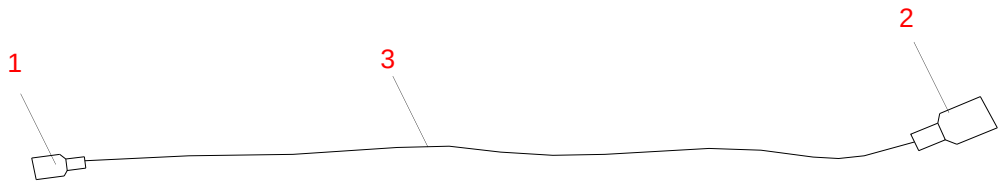


Figure 3-59: OT Switch to Reflector Assy. Cable Assembly

Pan/Tilt Control Cable Assembly

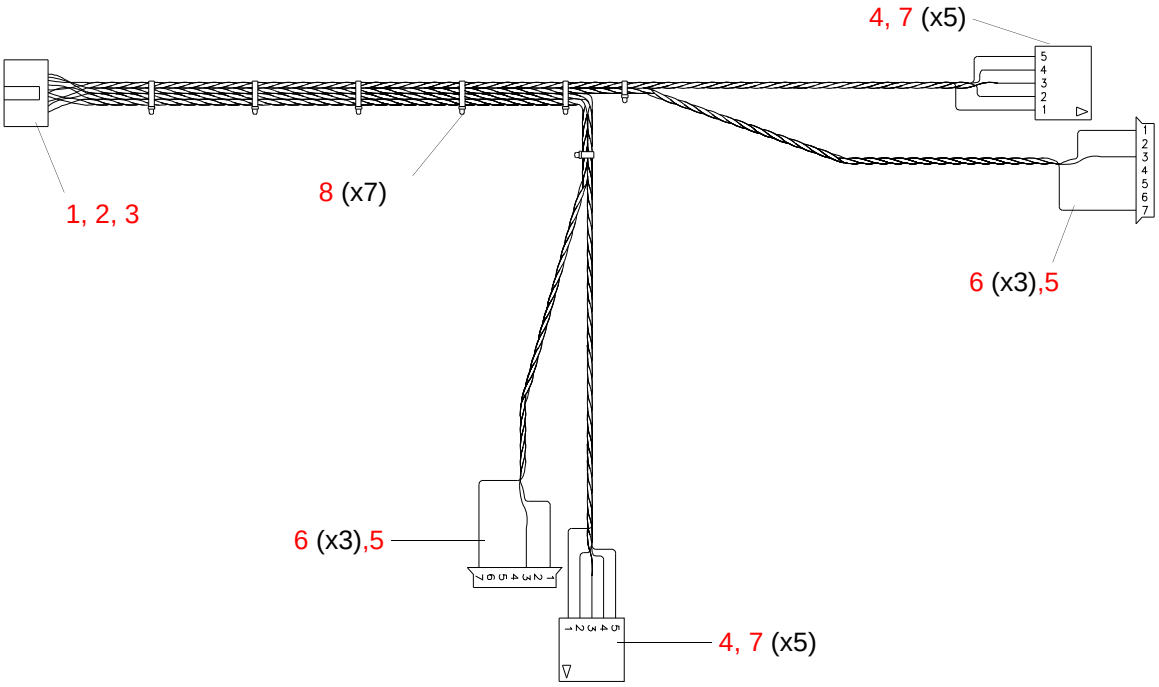
25.9676.0818 Rev B

Replace as a complete assembly.

Refer to Figure 3-60.

No.	Item	Qty.	UM.	Description
1		1	EA	HOUSING, 20 POS 26-22 AWG DBL ROW UNLOADED
2		1	EA	COVER, FRONT 20 POS MT LATCHING
3		1	EA	COVER, BACK 20 POS MT
4		2	EA	CONN, HOUSING 5 POS RECEPT
5		2	EA	HOUSING, 7 POS 250V/3A 2.5 MM PITCH
6		6	EA	CONTACT, 28-22 AWG PHOSPHOR BRONZE TIN-PLT
7		10	EA	CONTACT, 24-30 AWG FEMALE CRIMP
8		8	EA	CABLE TIE, .10" X 4" SMALL
9		7.08	FT	WIRE, 24 AWG 3 COND TW 600V 200 DEG C <RED-YEL-BLU>
10		7.17	FT	WIRE, 24 AWG 5 COND 300V 80 DEG C <BLK-BRN-RED-GRY-WHT>
-		16	EA	CONTACT, 26-22 AWG RECP MTE (NOT SHOWN)

Pan/Tilt Control Cable Assembly (continued)



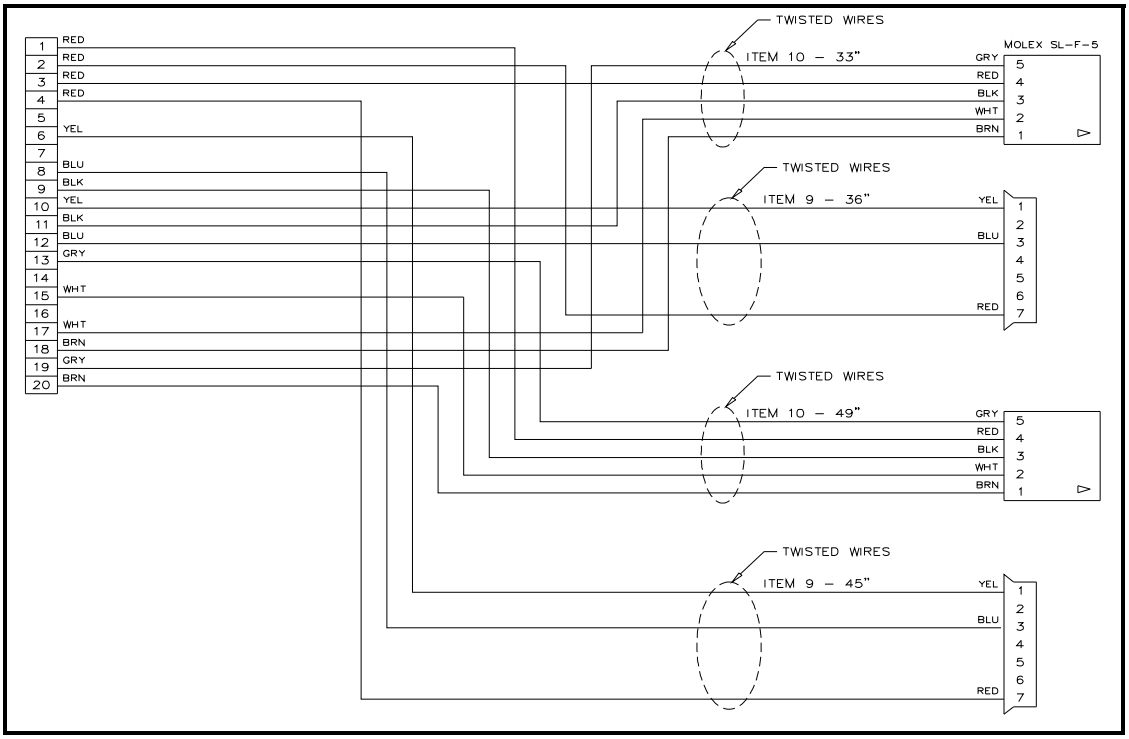


Figure 3-60: Pan/Tilt Control Cable Assembly

EMI Filter to Power Switch Cable Assembly

25.9678.0811 Rev C

Replace as a complete assembly.

Refer to Figure 3-61

No.	Item	Qty.	UM.	Description
1		2	EA	RCPT, FASTON 1/4" 18-14 AWG FLAG DBL CRP (REEL)
2		2	EA	RECP, FASTON .187"X0.32" 16-14 AWG FLAG DBL CRP
3		1	EA	CABLE TIE, .10"WD 4.00"LG SMALL
4		0.83	FT	WIRE, 16AWG 600V 105C PVC WHT UL1015
5		0.83	FT	WIRE, 16AWG 600V 105C PVC BLK UL1015

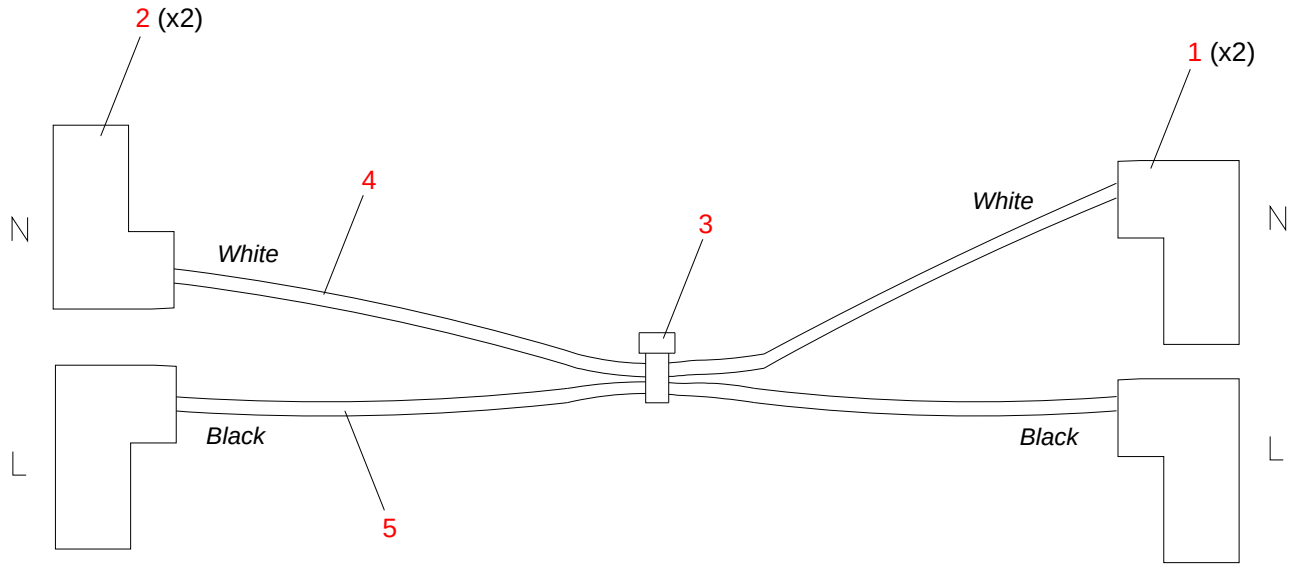


Figure 3-61: EMI Filter to Power Switch Cable Assembly

AC Input Splitter Cable Assembly

25.9678.0812 Rev E

Replace as a complete assembly.

Refer to Figure 3-62

No.	Item	Qty.	UM.	Description
1		1	EA	PLUG HOUSING, MNLOK PLUG 3POS
2		1	EA	TERM, RING #6 BLUE 16-14 AWG REEL PIDG
3		2	EA	TERM, SPADE #6 RED 22-16AWG INSERT
4		2	EA	RECP, FASTON .187"X0.32" 16-14 AWG FLAG DBL CRP
5		2	EA	CONTACT PIN, 20-14AWG MNLOK (REEL)
6		1	EA	PIN, GND 20-14AWG MNLOK .060"- .130"INS DIA
7		3	EA	CABLE TIE, .10"WD 4.00"LG SMALL
8		1.50	FT	SLEEVING, 1/2"NOM.DIA. POLY EXP BRAIDED
9		1.83	FT	WIRE, 16AWG 600V 105C PVC WHT UL1015
10		1.83	FT	WIRE, 16AWG 600V 105C PVC BLK UL1015
11		2.08	FT	WIRE, 16AWG 600V 105C PVC GRN/YEL UL1015
12		1.00	FT	WIRE, 18AWG 600V 105C PVC WHT UL1015
13		1.00	FT	WIRE, 18AWG 600V 105C PVC BLK UL1015

AC Input Splitter Cable Assembly (continued)

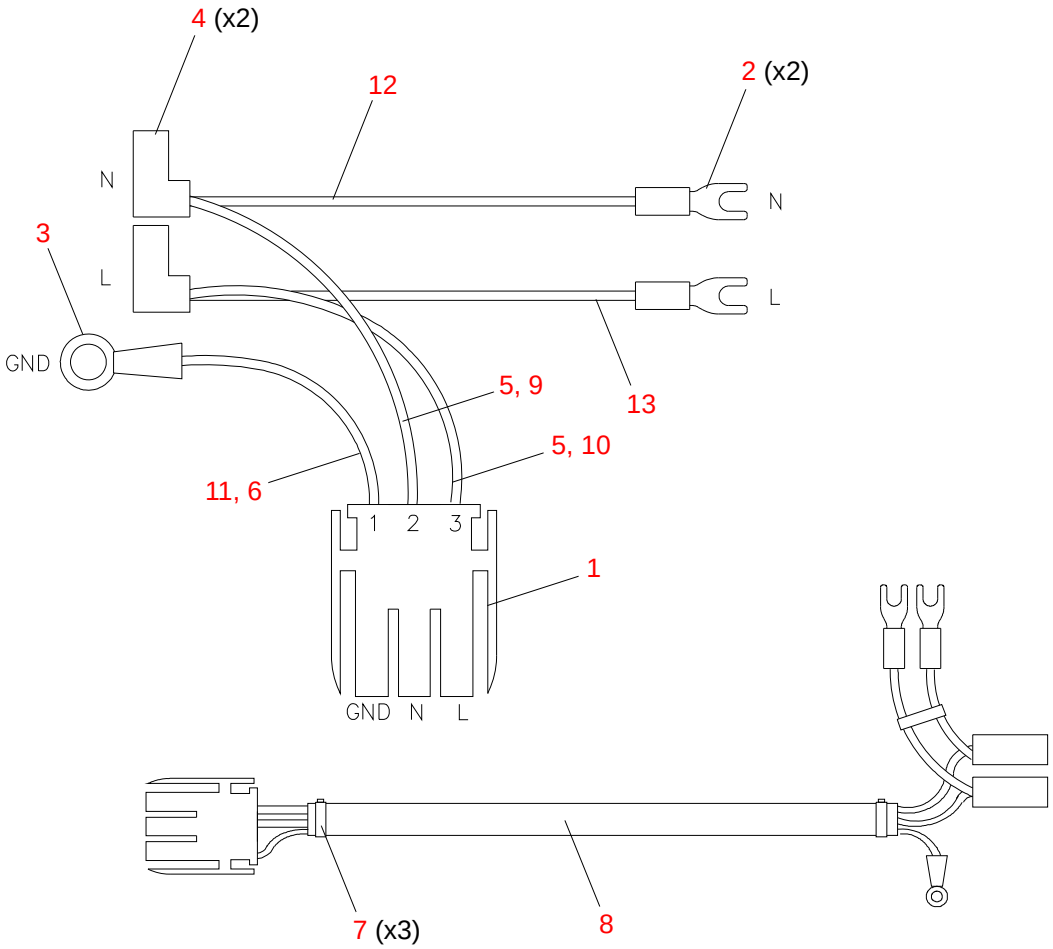


Figure 3-62: AC Input Splitter Cable Assembly

Data I/O Link Cable Assembly

25.9678.0813 Rev A

Replace as a complete assembly.

Refer to Figure 3-63

No.	Item	Qty.	UM.	Description
1		1	EA	RECEPT, 4 POS MTA100 W/POL TAB RED CLSD END
2		1	EA	RECEPT, 5 POS MTA100 W/POL TAB RED CLSD END
3		2.17	FT	CBL, 22AWG STRND 4COND PVC INSUL

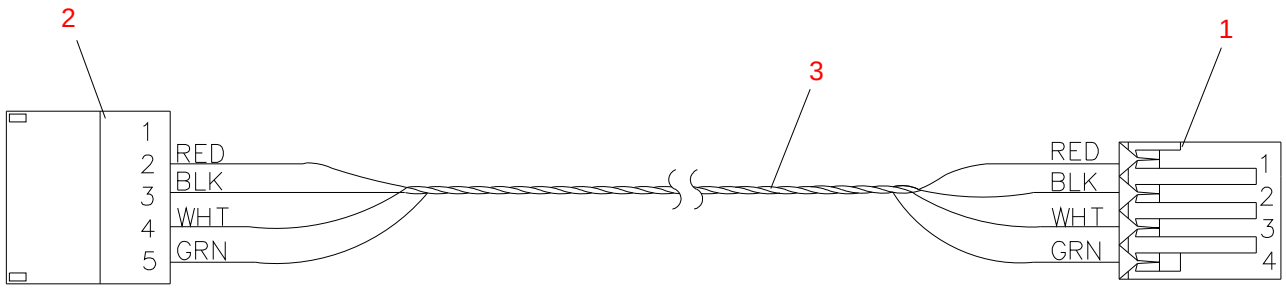


Figure 3-63: Data I/O Link Cable Assembly

Display Cable Assembly

25.9678.1825 Rev 0

Replace as a complete assembly.

Refer to Figure 3-64

No.	Item	Qty.	UM.	Description
1		2	EA	RECEPT, 6 POS MTA100 W/POL TAB WHT CLSD END
2		4	EA	CABLE TIE, 0.10" WD 4" LG SMALL
3		1	EA	SLEEVE, NYLON THIN WALL #6 SCR 1.0" LG
4		0.208	FT	SLEEVING, 3/8" NOM DIA POLY EXP
5		1.02	FT	WIRE, 24AWG 4COND TW <BLK-BRN-RED-ORN>
6		0.208	FT	WIRE, 24 AWG 600V 200 DEG C TFE GRN
7		0.958	FT	WIRE, TUBULAR BRAID, 1/8" X 23" LG

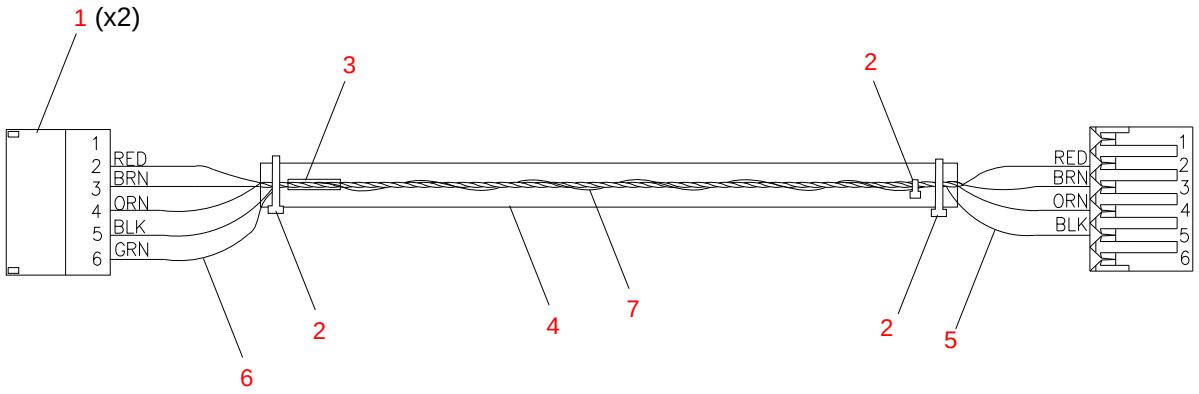


Figure 3-64: Display Cable Assembly

Ballast to Controller Cable Assembly

25.9678.0816 Rev A

Replace as a complete assembly.

Refer to Figure 3-65

No.	Item	Qty.	UM.	Description
1		1	EA	RECEPT, 2 POS MTA100 W/POL TAB WHT CLSD END
2		1	EA	RECEPT, 5 POS MTA100 W/POL TAB WHT CLSD END
3		1	EA	RECEPT, 8 POS MTA100 W/POL TAB WHT CLSD END
4		3.67	FT	WIRE, 24AWG 5COND <BLK-BRN-RED-GRN-WHT>

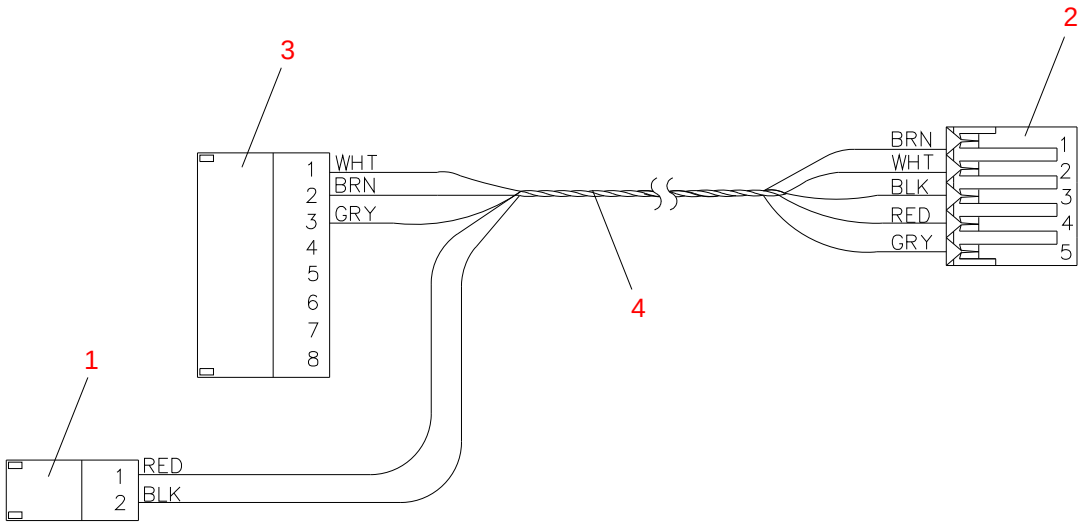


Figure 3-65: Ballast to Controller Cable Assembly

Lamp Supply to Relay Cable Assembly

25.9678.0829 Rev A

Replace as a complete assembly.

Refer to Figure 3-66

No.	Item	Qty.	UM.	Description
1		4	EA	RECP, FASTON 1/4" 18-14 AWG INSULATED VO
2		3	EA	CABLE TIE, .10"WD 4.00"LG SMALL
3		3.19	FT	SLEEVING, 1/2" NOM. DIA POLY EXP BRAIDED
4		34.41	FT	WIRE, 22AWG BLK 300V TEFLON STRANDED
5		34.41	FT	WIRE, 22AWG WHT 300V TEFLON STRANDED
6		.58	FT	WIRE, 16AWG 300V 105C PVC GRN/YEL UL1569
7		1	EA	TERM, RING #10 16-14 AWG REEL PIDG
8		2.08	FT	WIRE, TUBULAR BRAID, 7/16"
9		.33	FT	HEATSHRINK, 1/2" BLACK

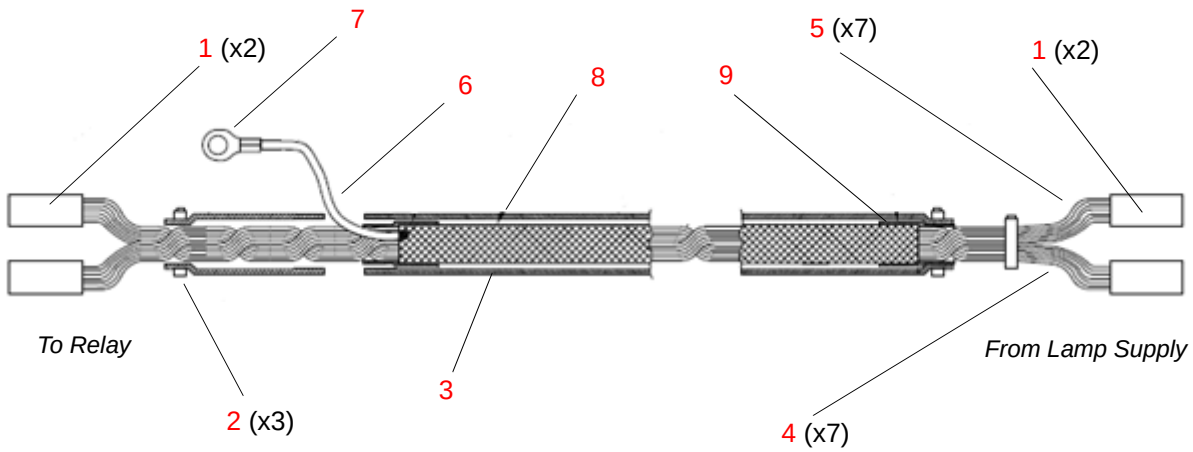


Figure 3-66: Lamp Supply to Relay Cable Assembly

DC Output Cable Assembly

25.9678.0821 Rev E

Replace as a complete assembly.

Refer to Figure 3-67

No.	Item	Qty.	UM.	Description
1		1	EA	CONN, HOUSING, SL-156 2 POS
2		1	EA	CONN, HOUSING, SL-156 3 POS
3		2	EA	TERM, RING #6 BLUE 12-10 AWG INSRT
4		4	EA	CONTACT, CRIMP, 18-22 AWG SL-156
5		2	EA	CONN BUTT SPLICE 16-14 BLUE .150" OD MAX
6		4	EA	CABLE TIE, .01" x 4.00" SMALL
7		2.08	FT	SLEEVING, 1/2" NOM DIA POLY EXP BRAID
8		1.58	FT	WIRE, 18 AWG 300V 105C PVC RED
9		1.58	FT	WIRE, 18 AWG 300V 105C PVC BLK
10		2.08	FT	WIRE, 18 AWG HI VOLT RED YOKE LMP
11		2.08	FT	WIRE, 18 AWG HI VOLT BLK YOKE LMP

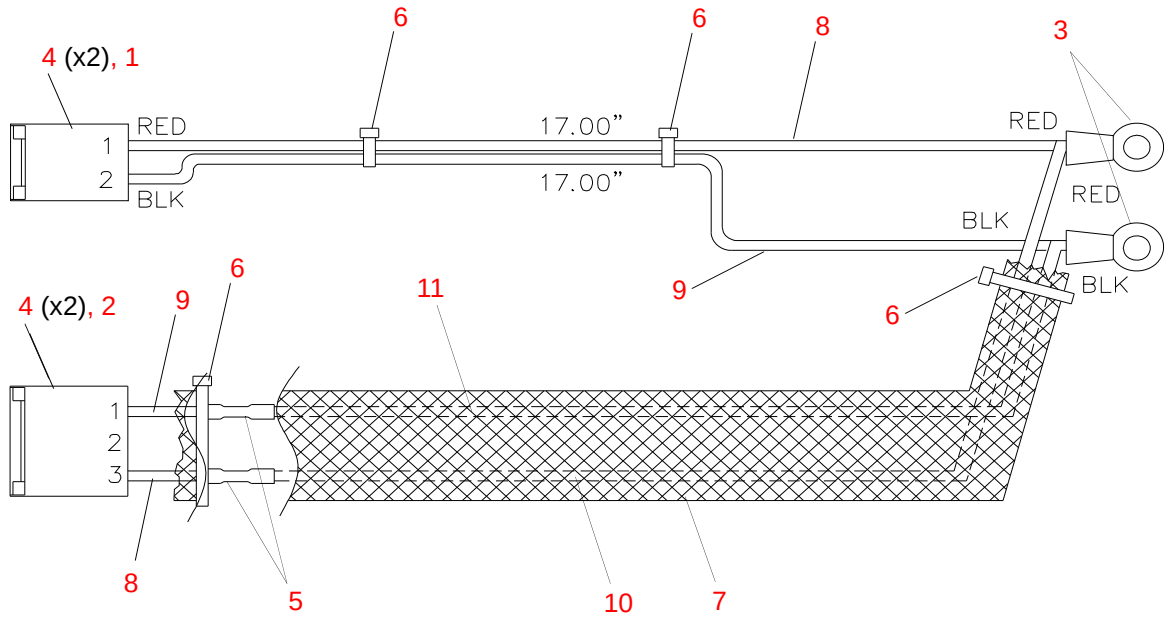
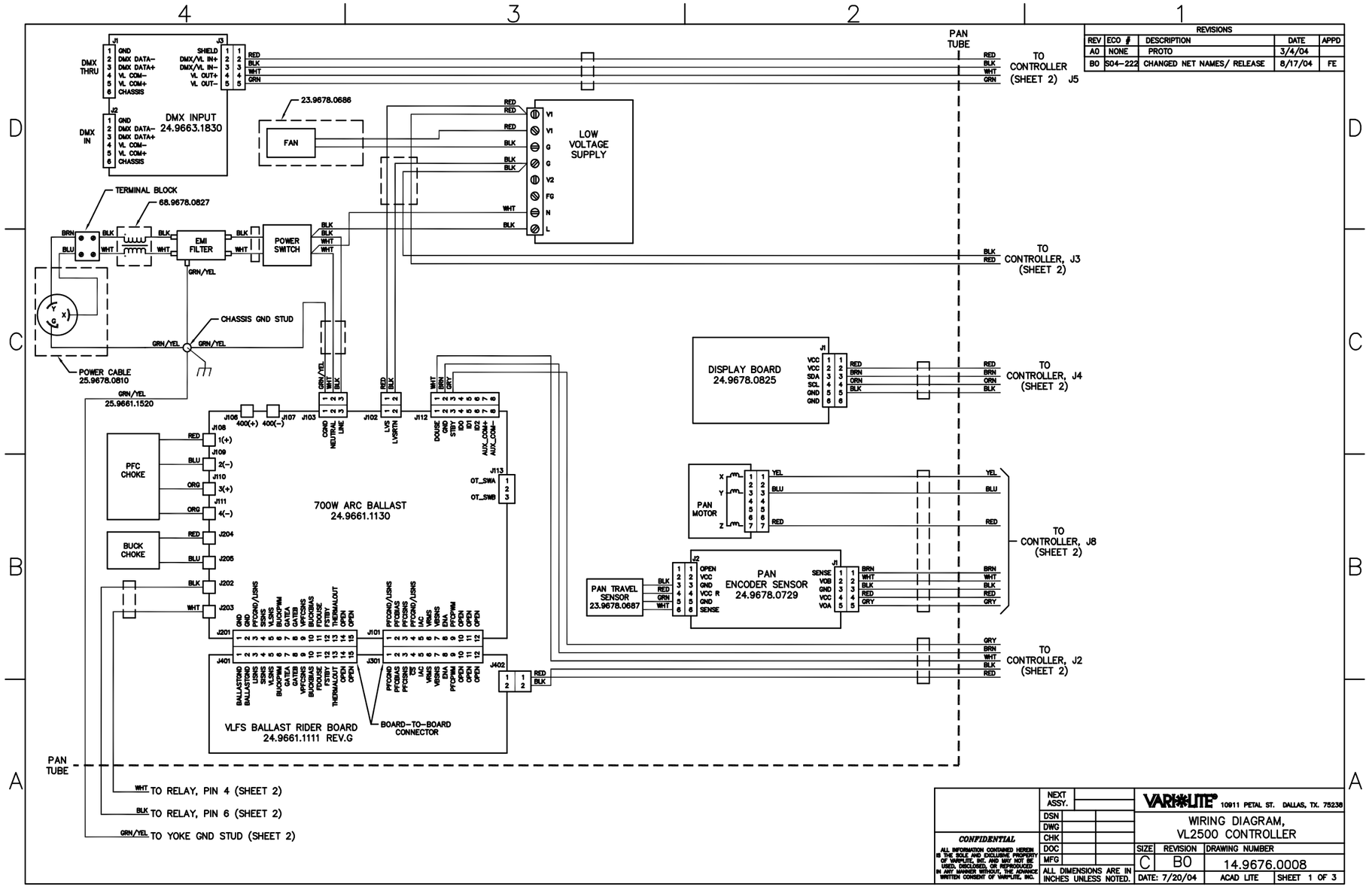


Figure 3-67: DC Output Cable Assembly

VL2500™ Spot Luminaire Schematics

VL2500 Luminaire Wiring Diagram


REVISIONS
REV | ECO # | DESCRIPTION | DATE | APPD
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B0 | S04-222 | CHANGED NET NAMES/ RELEASE | 8/17/04 | FE
DMX INPUT 24.9663.1830
DMX THRU
DMX IN
23.9678.0686
FAN
LOW VOLTAGE SUPPLY
TERMINAL BLOCK
68.9678.0827
EMI FILTER
POWER SWITCH
CHASSIS GND STUD
POWER CABLE 25.9678.0810
GRN/YEL 25.9661.1520
PFC CHOKE
BUCK CHOKE
700W ARC BALLAST 24.9661.1130
VLFS BALLAST RIDER BOARD 24.9661.1111 REV.G
BOARD-TO-BOARD CONNECTOR
PAN TUBE
DISPLAY BOARD 24.9678.0825
PAN MOTOR
PAN TRAVEL SENSOR 23.9678.0687
PAN ENCODER SENSOR 24.9678.0729
TO CONTROLLER (SHEET 2) J5
TO CONTROLLER, J3 (SHEET 2)
TO CONTROLLER, J4 (SHEET 2)
TO CONTROLLER, J8 (SHEET 2)
TO CONTROLLER, J2 (SHEET 2)
WHT TO RELAY, PIN 4 (SHEET 2)
BLK TO RELAY, PIN 6 (SHEET 2)
GRN/YEL TO YOKE GND STUD (SHEET 2)
NEXT ASSY.
DSN
DWG
CHK
DOC
MFG
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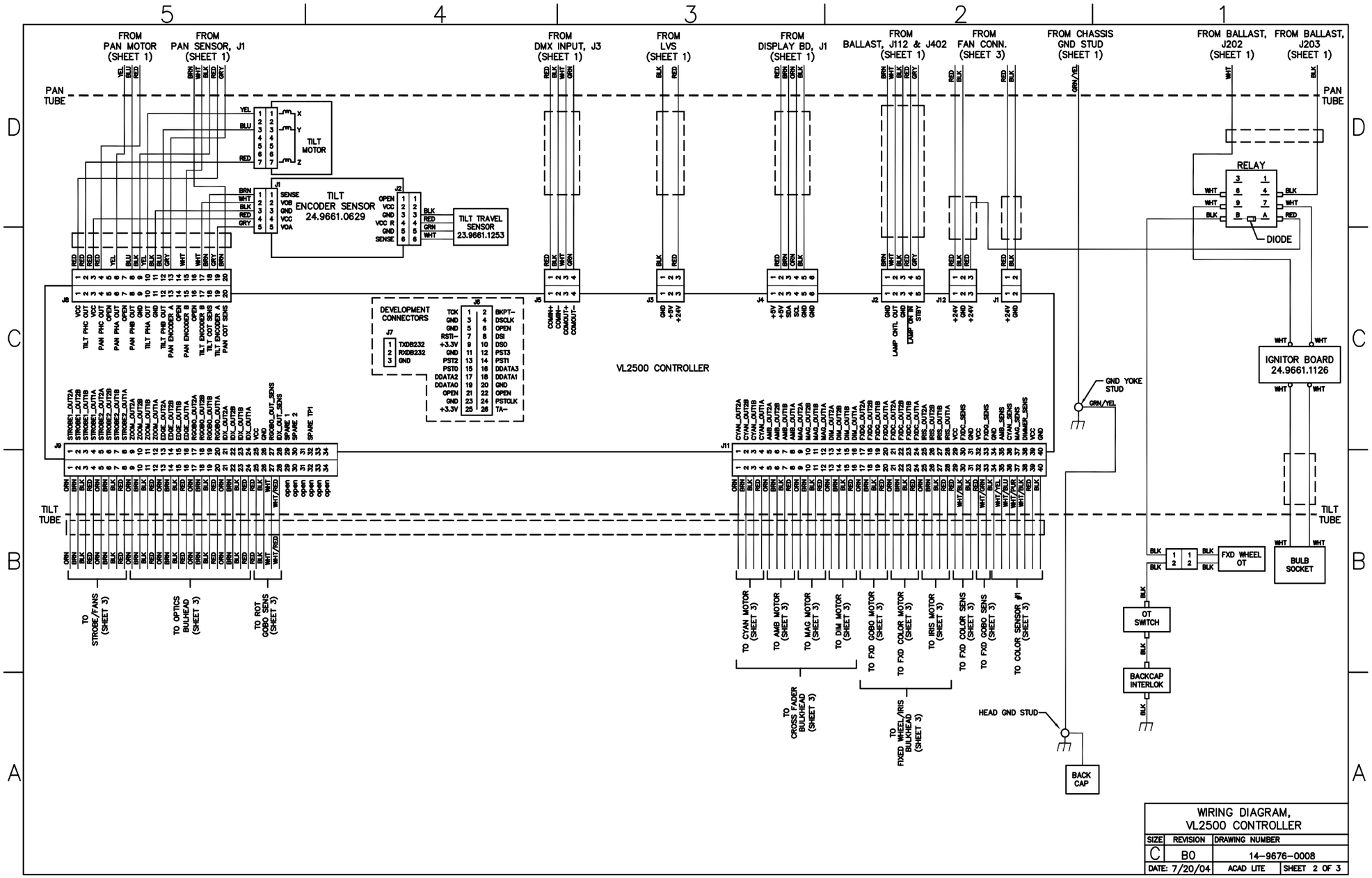
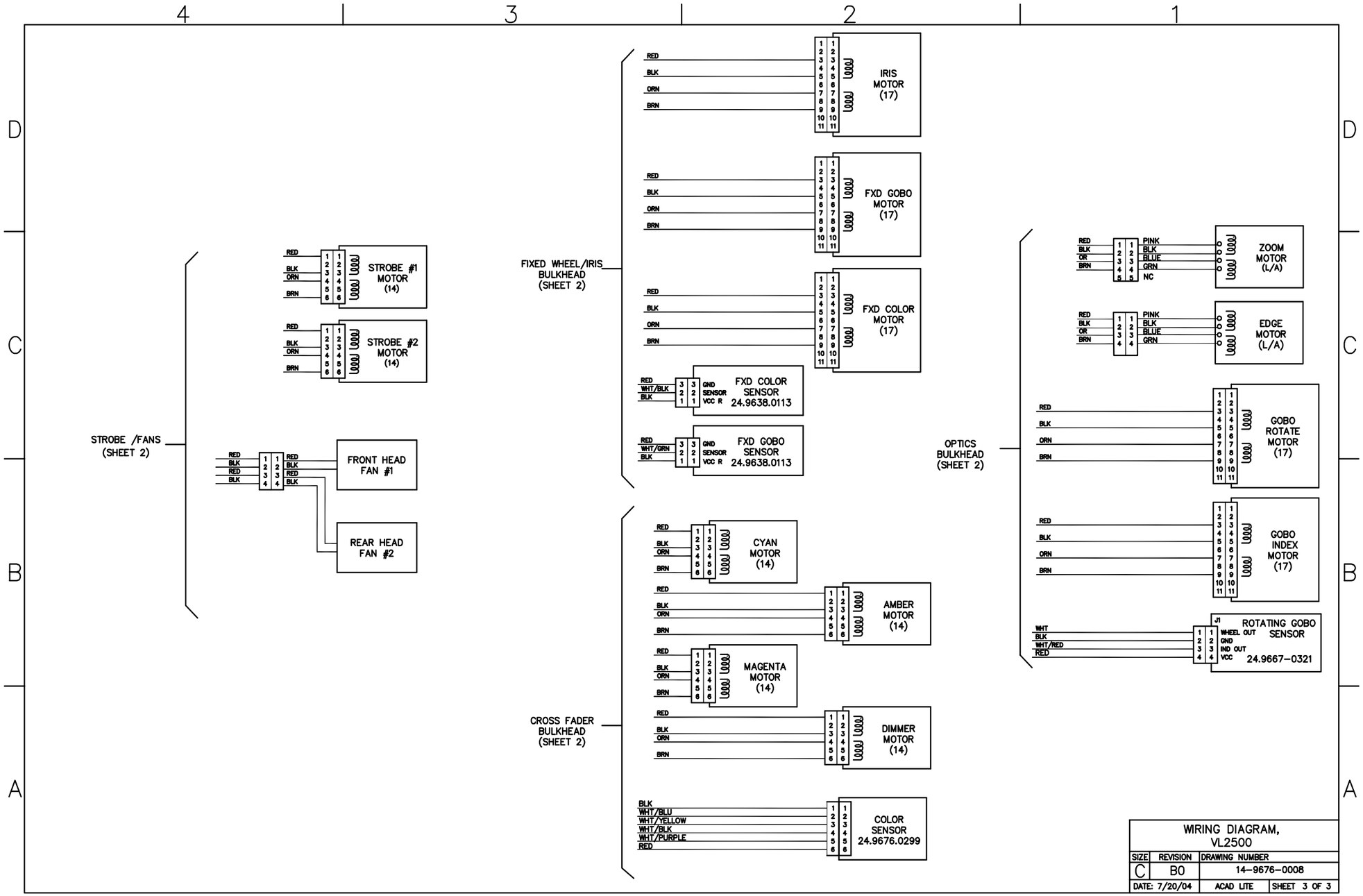
VARI*LITE 10911 PETAL ST. DALLAS, TX. 75238
WIRING DIAGRAM, VL2500 CONTROLLER
SIZE | REVISION | DRAWING NUMBER
C | B0 | 14.9676.0008
DATE: 7/20/04 | ACAD LITE | SHEET 1 OF 3

VL2500 Luminaire Wiring Diagram (continued)


FROM PAN MOTOR (SHEET 1)
FROM PAN SENSOR, J1 (SHEET 1)
FROM DMX INPUT, J3 (SHEET 1)
FROM LVS (SHEET 1)
FROM DISPLAY BD, J1 (SHEET 1)
FROM BALLAST, J112 & J402 (SHEET 1)
FROM FAN CONN. (SHEET 3)
FROM CHASSIS GND STUD (SHEET 1)
FROM BALLAST, J202 (SHEET 1)
FROM BALLAST, J203 (SHEET 1)
PAN TUBE
TILT MOTOR
TILT ENCODER SENSOR 24.9661.0629
TILT TRAVEL SENSOR 23.9661.1253
RELAY
DIODE
IGNITOR BOARD 24.9661.1126
DEVELOPMENT CONNECTORS
VL2500 CONTROLLER
GND YOKE STUD
TILT TUBE
FXD WHEEL OT
BULB SOCKET
OT SWITCH
BACKCAP INTERLOK
HEAD GND STUD
BACK CAP
TO STROBE/FANS (SHEET 3)
TO OPTICS BULLHEAD (SHEET 3)
TO ROT. GOBO SENS (SHEET 3)
TO CYAN MOTOR (SHEET 3)
TO AMB MOTOR (SHEET 3)
TO MAG MOTOR (SHEET 3)
TO DIM MOTOR (SHEET 3)
TO FXD GOBO MOTOR (SHEET 3)
TO FXD COLOR MOTOR (SHEET 3)
TO IRIS MOTOR (SHEET 3)
TO FXD COLOR SENS (SHEET 3)
TO FXD GOBO SENS (SHEET 3)
TO COLOR SENSOR #1 (SHEET 3)
TO CROSS FADER BULLHEAD (SHEET 3)
TO FIXED WHEEL/IRIS BULLHEAD (SHEET 3)
WIRING DIAGRAM, VL2500 CONTROLLER
SIZE C
REVISION B0
DRAWING NUMBER 14-9676-0008
DATE: 7/20/04
ACAD LITE
SHEET 2 OF 3

VL2500 Luminaire Wiring Diagram (continued)

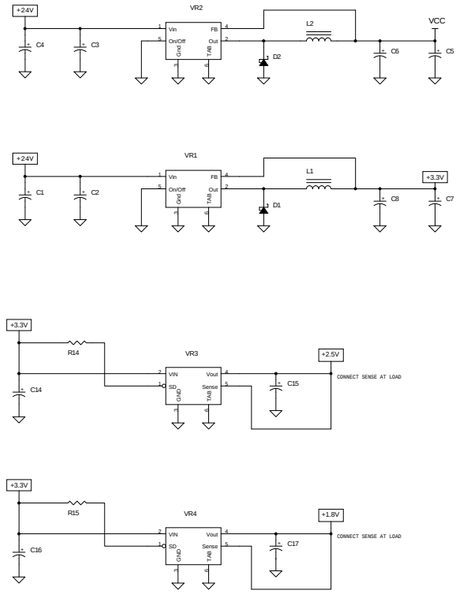


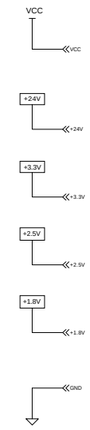
Main Control Board (MCB) Schematic

REV. NO	ECO #	DESCRIPTION	DATE	APPROVED
A0	NONE	ENG RELEASE	4/16/04	
A1	NONE	CHANGED VALUES ON VR1 AND VR4	4/27/04	
A2	NONE	CHANGED VALUES ON RES- SHT 2	5/11/04	
B0	584-	CHANGED NETS & TEST PTS NAMES U6-5 NOW ISO GND/U21-9 NOW NC		

NOTES: UNLESS OTHERWISE SPECIFIED

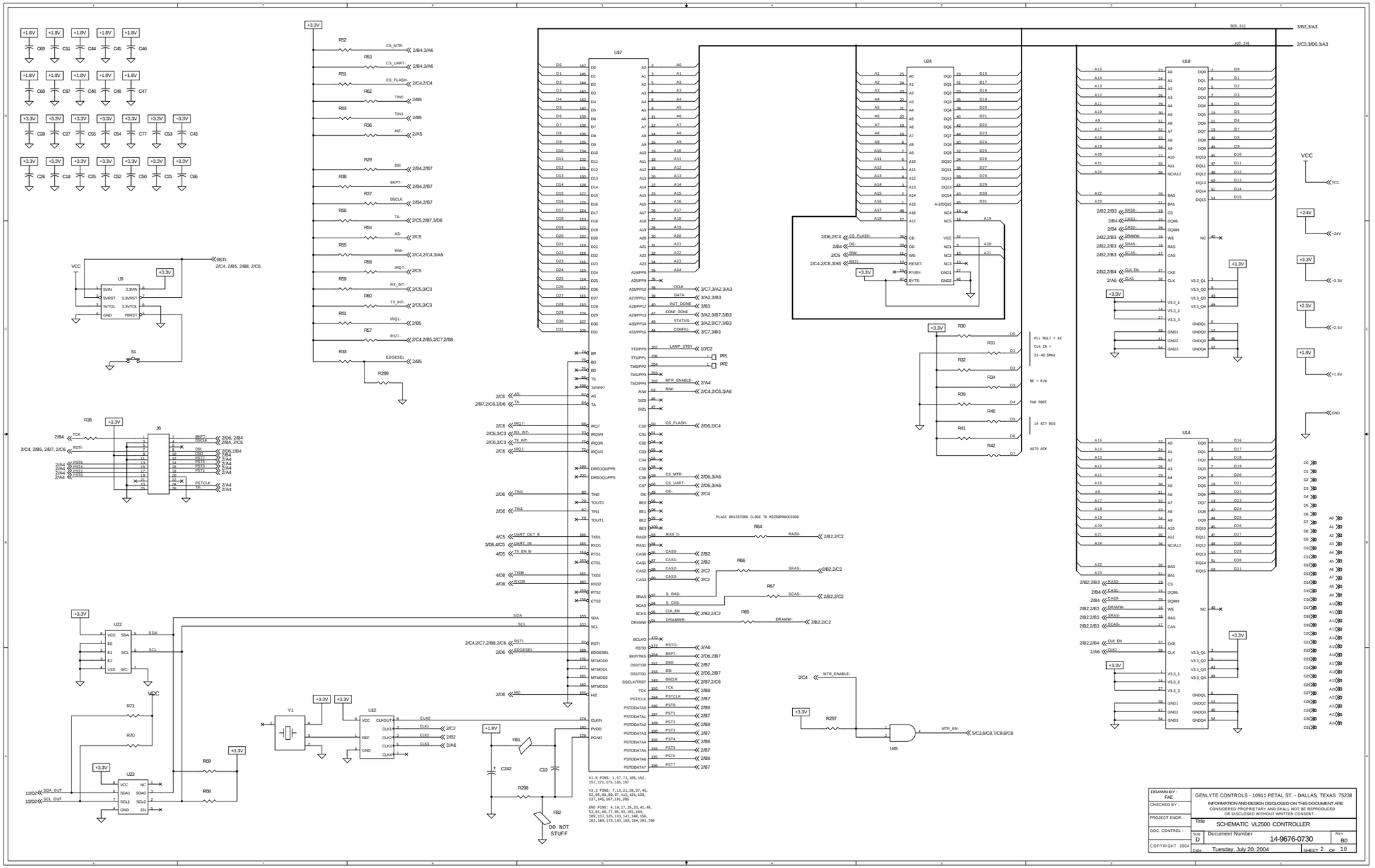
1.) ALL CAPACITOR VALUES ARE IN MICROFARADS.
2.) ALL RESISTOR VALUES ARE IN OHMS.
3.) PAGE 9 OF 10 HAS NO PARTS - MAY USE AT A LATER TIME.



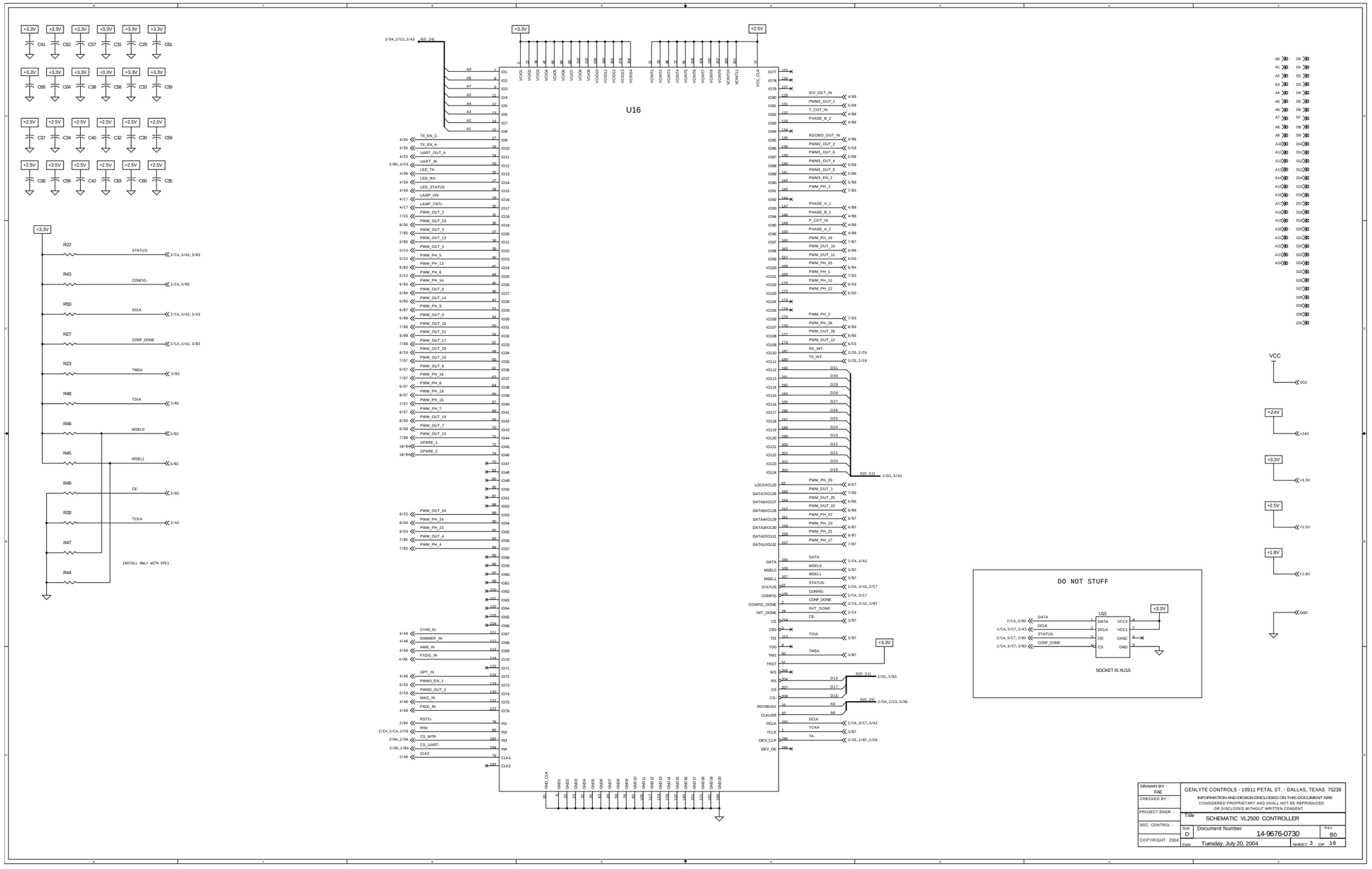


DRAWN BY : FAE	GENLYTE CONTROLS - 10911 PETAL ST. - DALLAS, TEXAS 75238
CHECKED BY :	INFORMATION AND DESIGN DISCLOSED ON THIS DOCUMENT ARE CONSIDERED PROPRIETARY AND SHALL NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN CONSENT.
PROJECT ENGR. :	Title: SCHEMATIC VL2500 CONTROLLER
DOC. CONTROL :	Size: D — Document Number: 14-9676-0730 — Rev: B0
COPYRIGHT 2004	Date: Tuesday, July 20, 2004 — SHEET 1 OF 18

Main Control Board (MCB) Schematic (continued)



Main Control Board (MCB) Schematic (continued)


U16
DO NOT STUFF
SOCKET IS XU15
GENLYTE CONTROLS - 10911 PETAL ST. - DALLAS, TEXAS 75238
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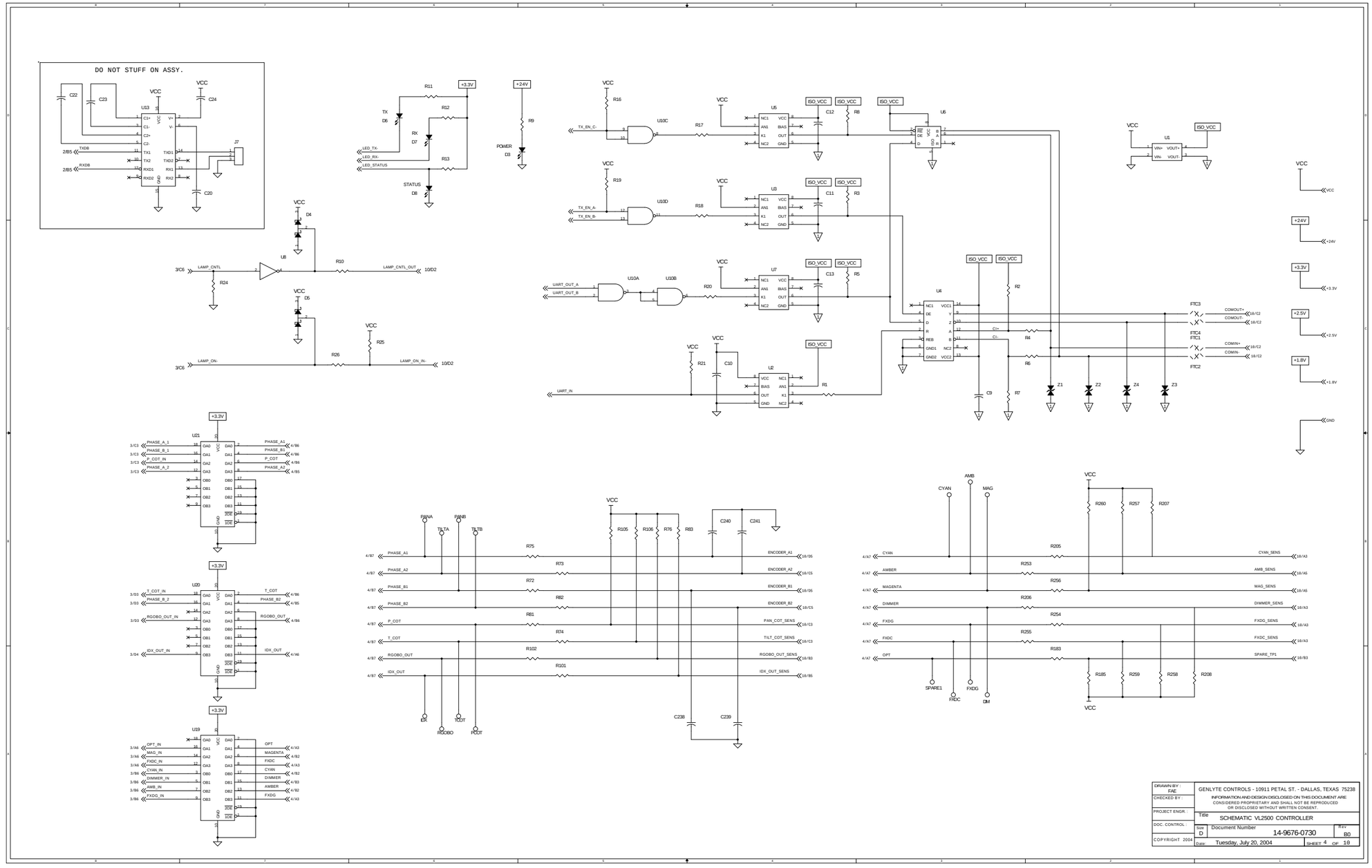
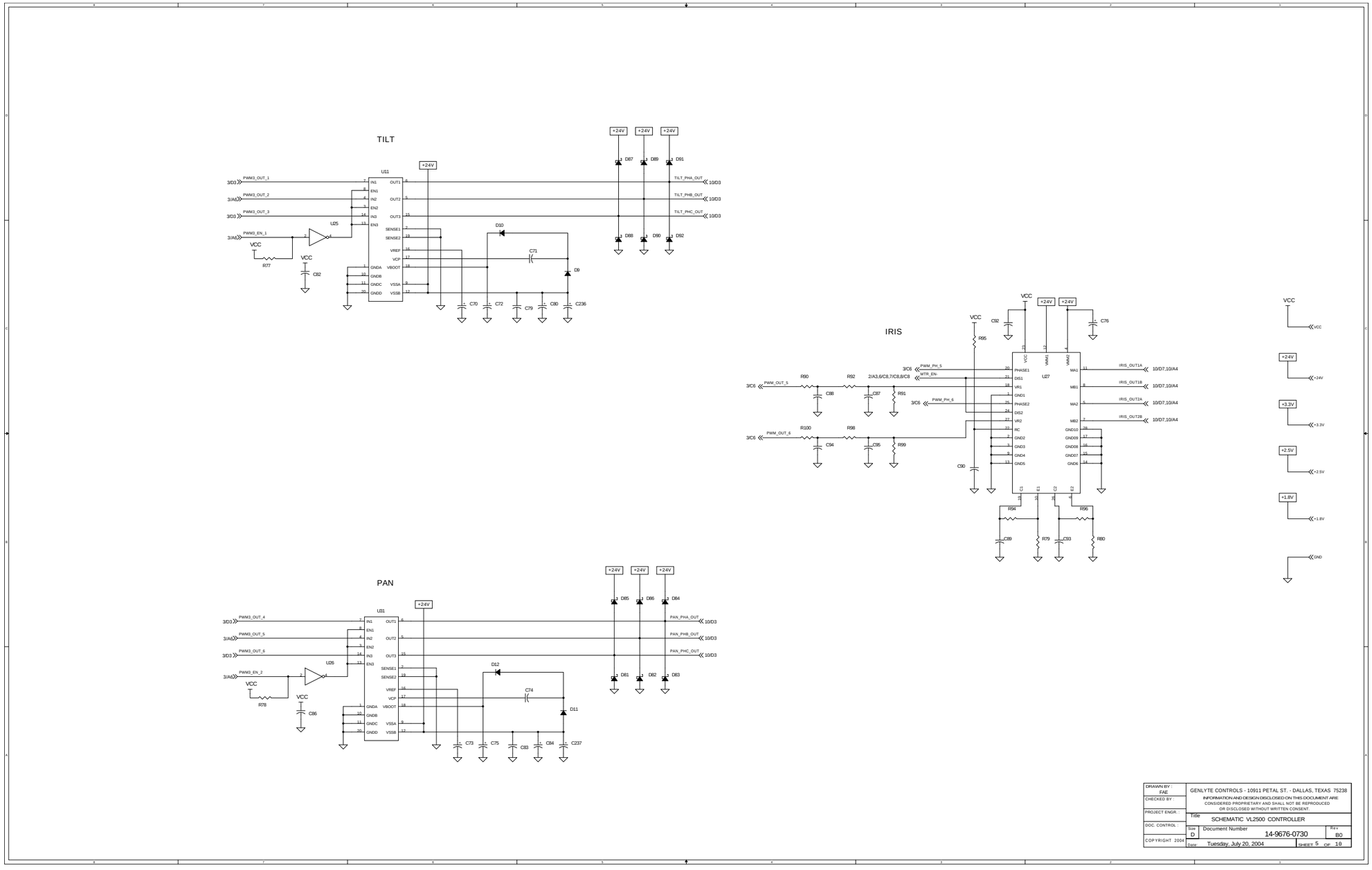
SCHEMATIC VL2500 CONTROLLER
14-9676-0730
Tuesday, July 20, 2004

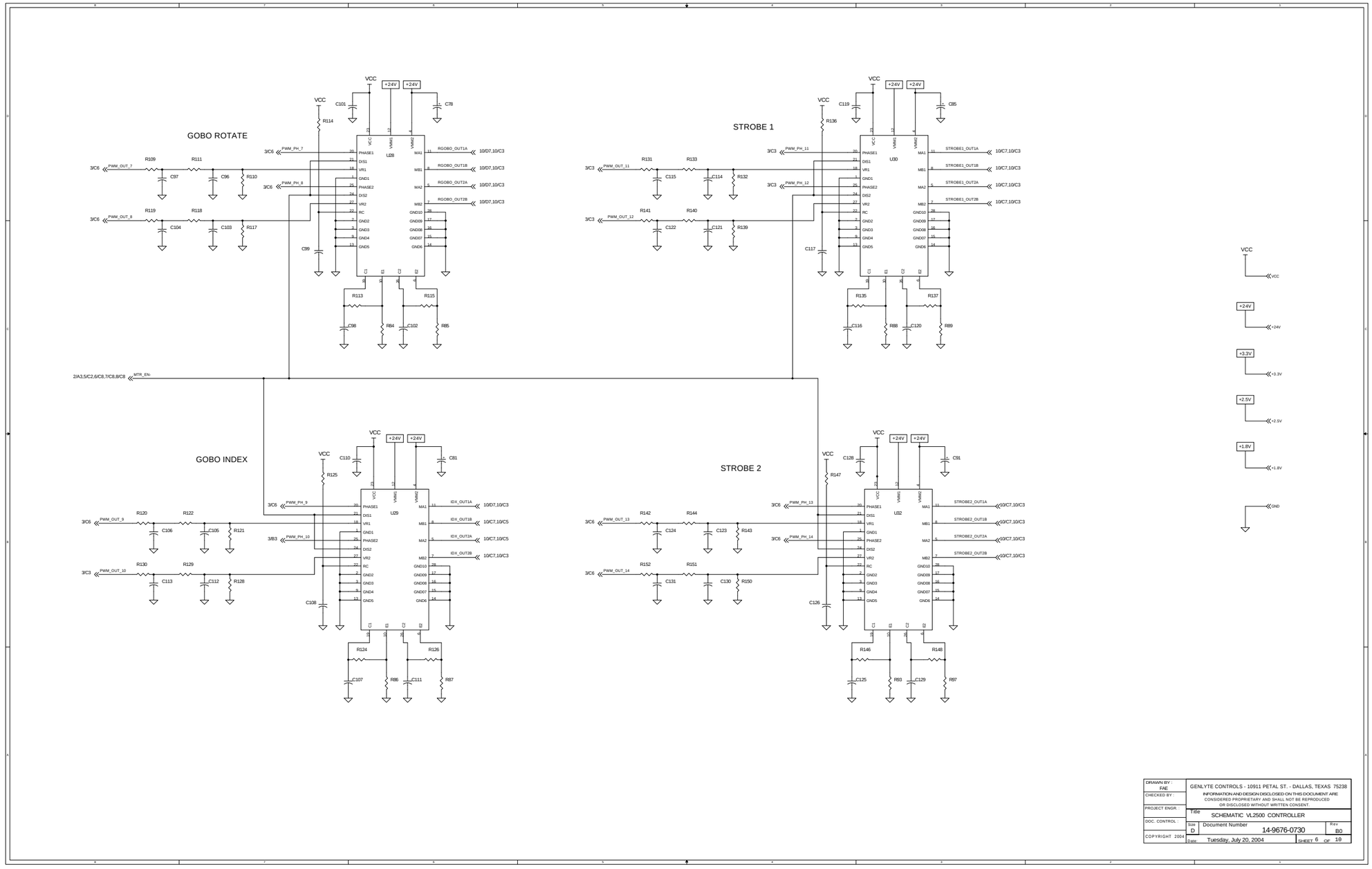
Main Control Board (MCB) Schematic (continued)



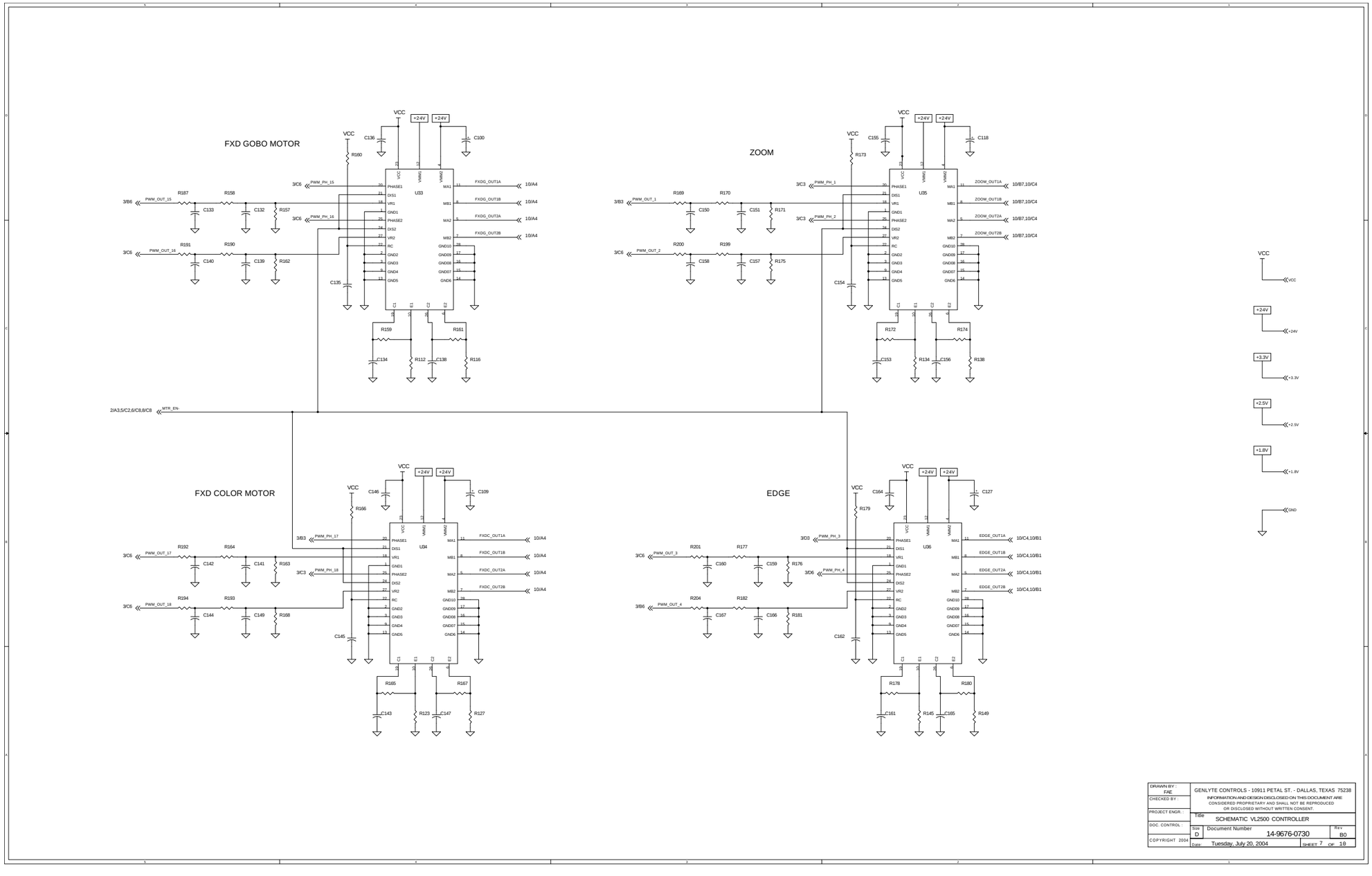
Main Control Board (MCB) Schematic (continued)



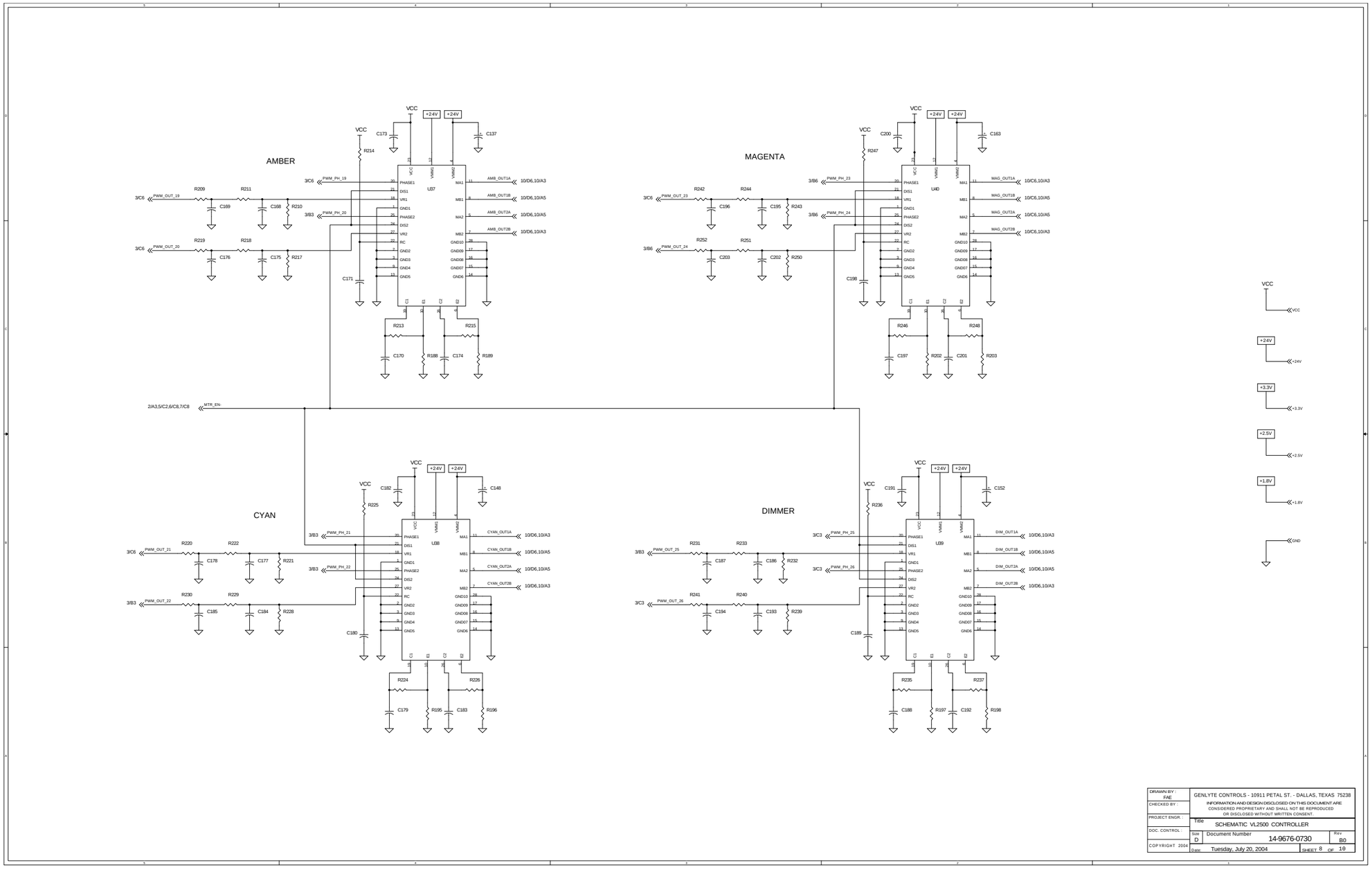
Main Control Board (MCB) Schematic (continued)



Main Control Board (MCB) Schematic (continued)

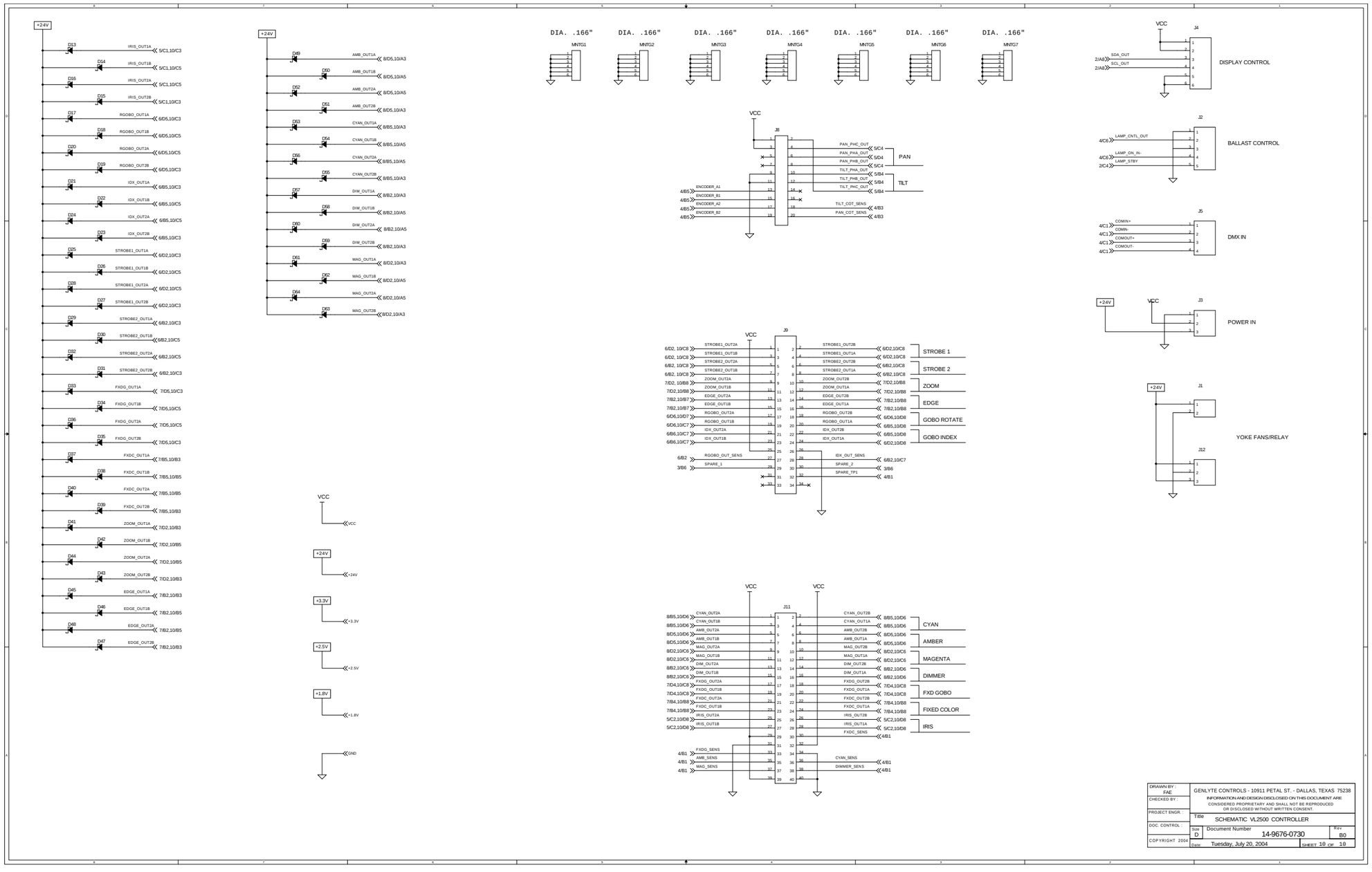


Main Control Board (MCB) Schematic (continued)

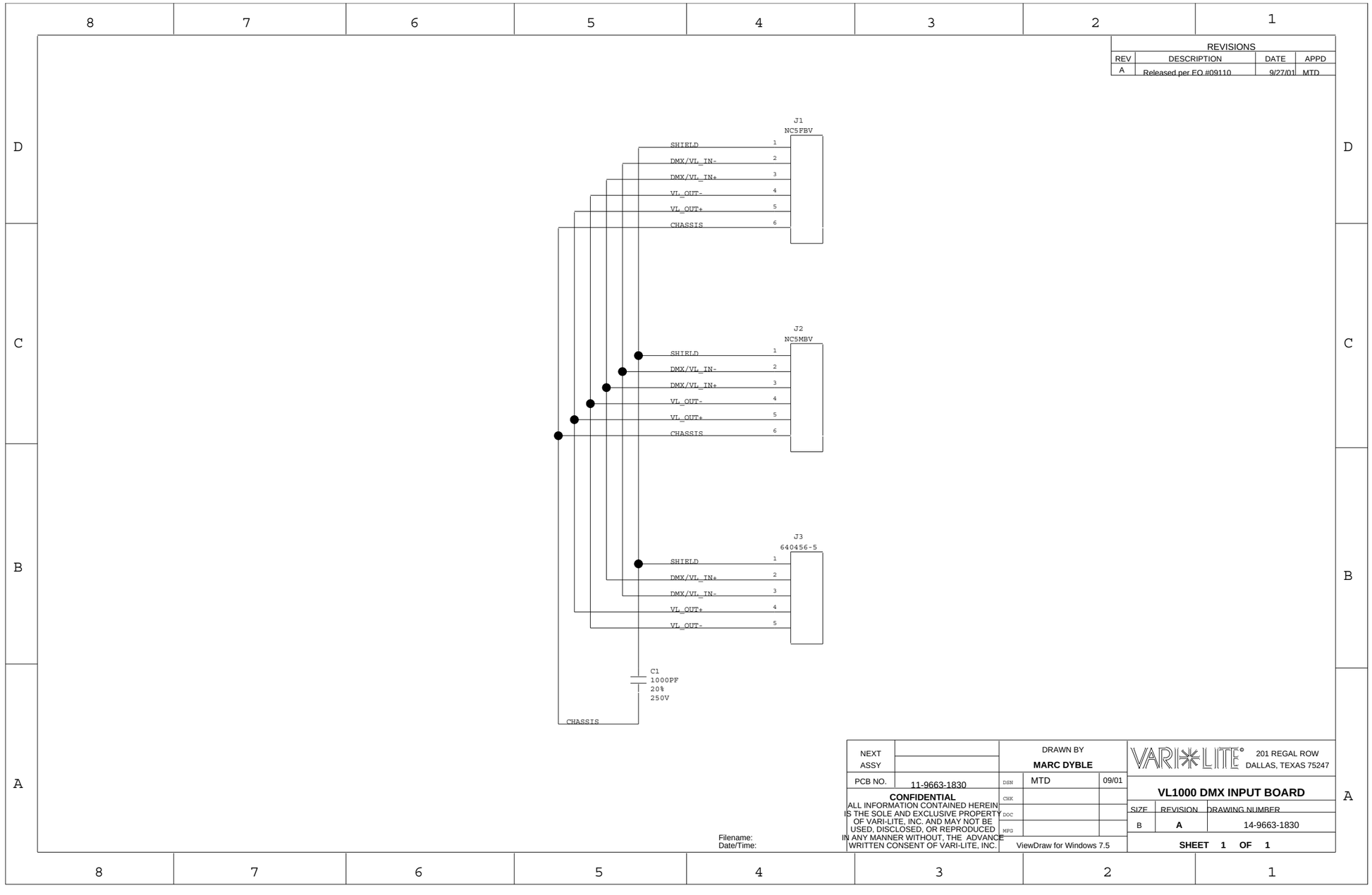


Main Control Board (MCB) Schematic (continued)

Main Control Board (MCB) Schematic (continued)



DMX Input Schematic



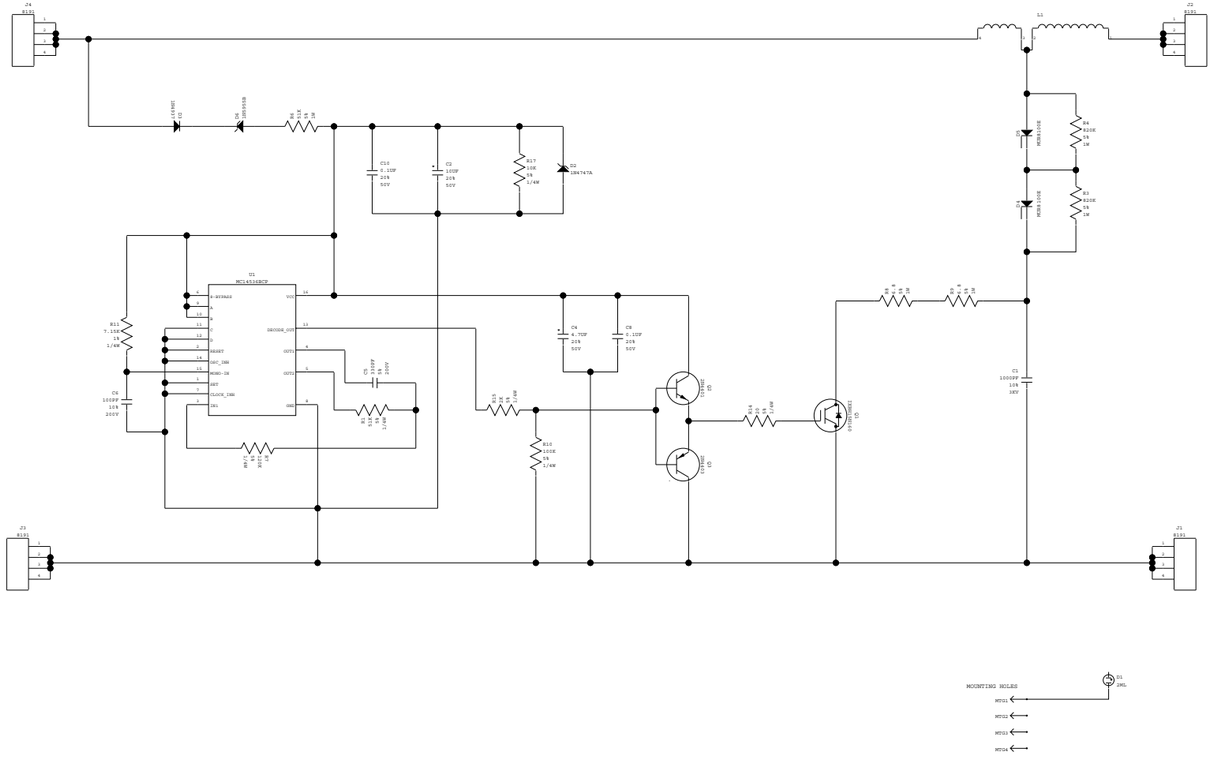
Solid State Ignitor Schematic

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL CAPACITOR VALUES ARE IN MICROFARADS.
2. ALL RESISTOR VALUES ARE IN OHMS.

REVISIONS			
REV	DESCRIPTION	DATE	APPD
1	ENGINEERING PROTOTYPE	7/16/02	B.C.
2	ENG RELEASE PER EO #09082	9/16/02	B.C.
A	REL. TO PROD. PER EO #09089		

REFERENCE DESIGNATORS	
LAST USED	NOT USED
C10	C3,C7,C9
D6	
J4	
L1	
Q3	
R19	R2,R5,R12,R13,R16
U1	



NEXT ASSY	24-9661-1126	DRAWN BY B. CURBO	VARI∗LITE®	201 REGAL ROW DALLAS, TEXAS 75247
PCB NO.	11.9661.1126	DSN 6-27-02 B.C.	SOLID STATE IGNITOR	
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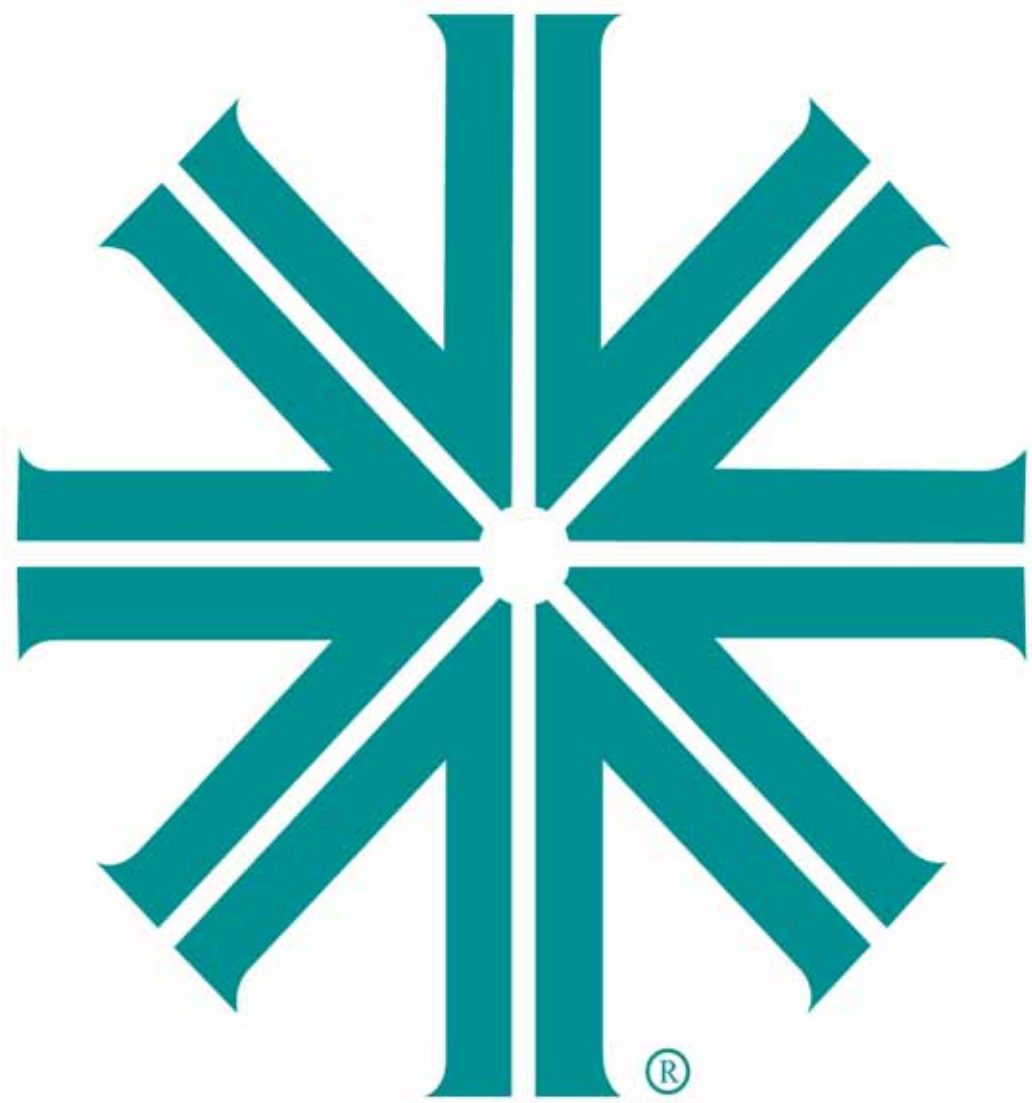
		eProduct Designer 2.0	DRAWING NUMBER: 14-9661-1126	
			SHEET 1 OF 1	

Filename: SSIGNITOR
Date/Time: 11-14-2002_14:21



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